

This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

#### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + Refrain from automated querying Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

#### **About Google Book Search**

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at http://books.google.com/

# DETERMINATION OF THE SOLAR PARALLAX

FROM PHOTOGRAPHS OF EROS
MADE WITH THE CROSSLEY REFLECTOR

ns.

THE LICK OBSERVATORY UNIVERSITY OF CALIFORNIA

PHILLIPS LIBRARY

OF

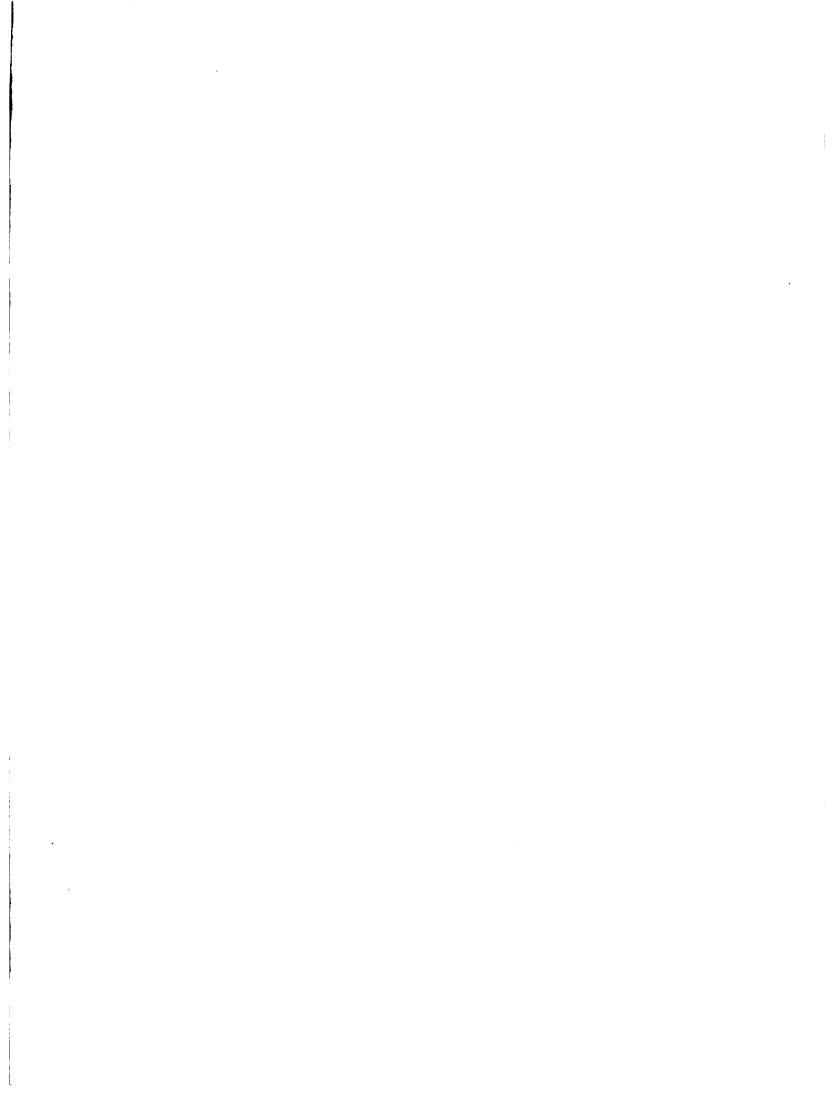
HARVARD COLLEGE OBSERVATORY

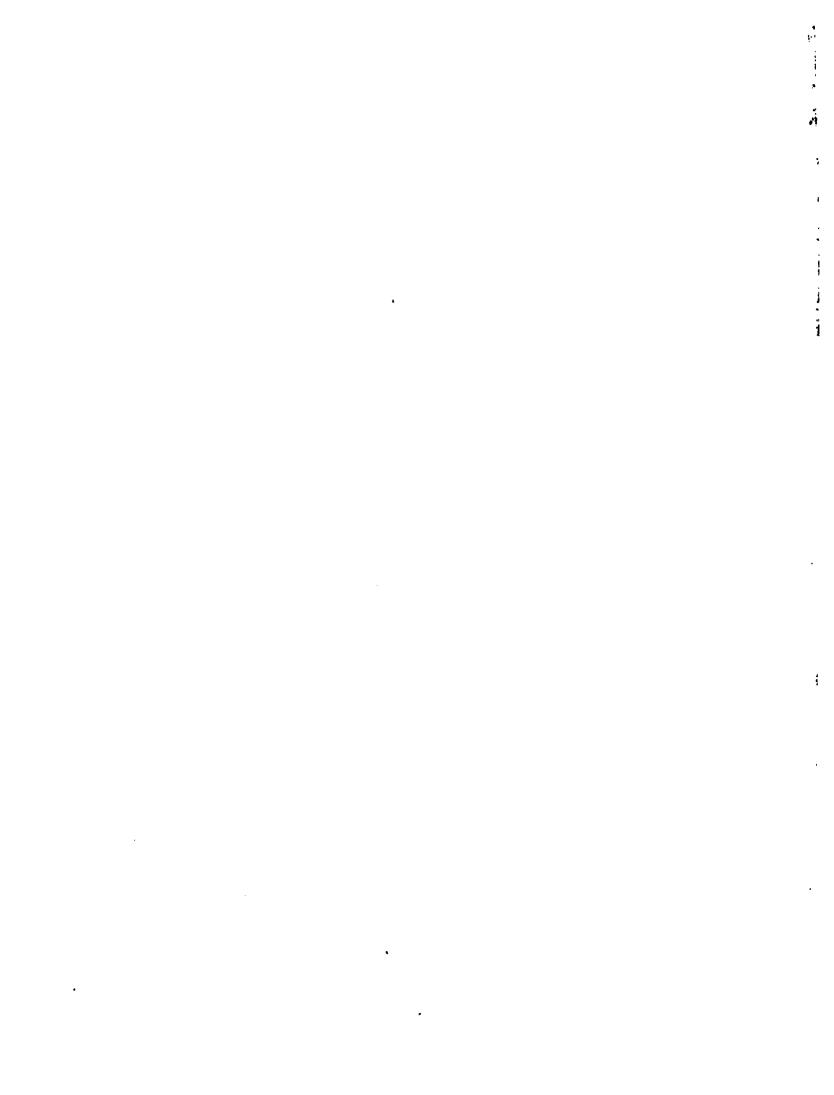
——•——

•

(

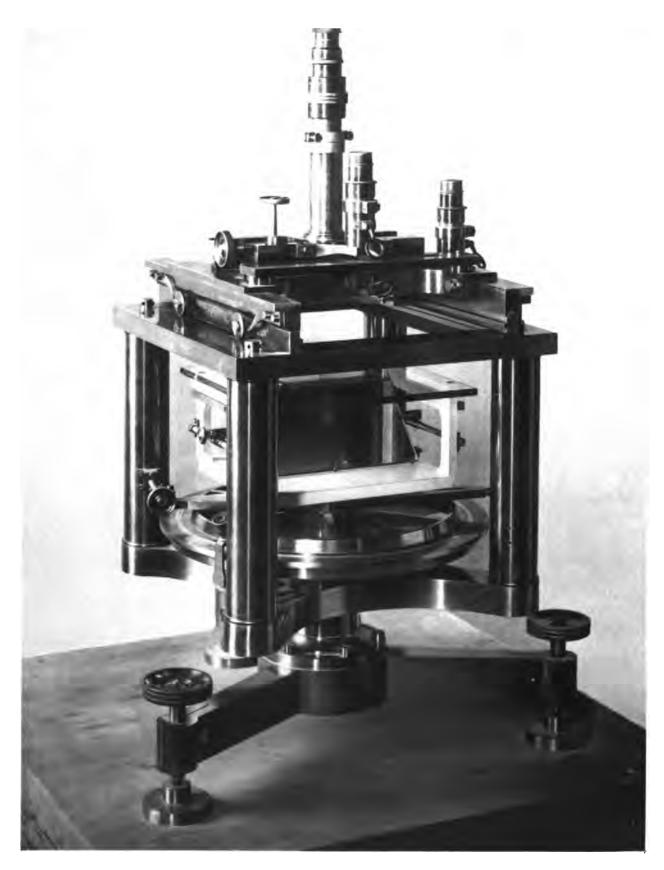
-:





	•			
•				

·				
			•	



THE HARKNESS-STACKPOLE MEASURING ENGINE

## DETERMINATION OF THE SOLAR PARALLAX

# FROM PHOTOGRAPHS OF EROS MADE WITH THE CROSSLEY REFLECTOR OF THE LICK OBSERVATORY UNIVERSITY OF CALIFORNIA

BY

CHARLES D. PERRINE, ASTRONOMER IN THE LICK OBSERVATORY

WITH THE ASSISTANCE OF

HAROLD K. PALMER, FELLOW IN THE LICK OBSERVATORY

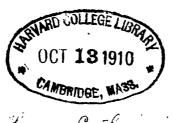
FREDRICA C. MOORE, ASSISTANT

ADELAIDE M. HOBE, ASSISTANT



WASHINGTON, D. C.

Published by the Carnegie Institution of Washington
1910



Henry G. Fligginson, Boston

Transferred to

Astronomical Observatory
of Harvard College.

1 Nov. 1910

CARNEGIE INSTITUTION OF WASHINGTON

Publication No. 119

#### PREFACE

A few days following the untimely death of Director Keeler, in August, 1900, it became my duty, as astronomer in charge, to make provision for carrying out the requests and recommendations of the Conférence Astrographique Internationale as to securing coöperative observations of Eros, for the determination of the solar parallax. To Assistant Astronomer Perrine was assigned the securing of such observations as could be advantageously made with the Crossley reflector. Mr. H. K. Palmer, who had assisted Professor Keeler in the photography of nebulæ and star clusters, and who was therefore familiar with the peculiarities of the original reflector mounting, was asked to assist Dr. Perrine. The observations were secured in great numbers on all favorable nights throughout the advantageous part of the opposition, as published in Lick Observatory Bulletin, No. 13.

There remained the work of measuring, reducing, and discussing the photographic observations. It was arranged that these duties should be undertaken by another observatory, of great experience in dealing with photographic star positions. Unfortunately, the long-continued illness and final death of the director of the observatory delayed the utilization of the Crossley reflector photographs for several years. The plates were returned to Mount Hamilton in 1905, and the work of measurement and reduction began in December, 1905, on the basis of a grant generously made by the Carnegie Institution of Washington for this purpose. This aid is herewith gratefully acknowledged.

The plates were measured and the more routine parts of the calculation carried through by Mrs. Moore and Miss Hobe, as explained in the text, under the supervision of Dr. Perrine. The critical parts of the reductions and the complete discussion of the results were made by Dr. Perrine personally. A detailed account of methods and formulæ employed is given in the following pages.

W. W. CAMPBELL.

		,
·		

### TABLE OF CONTENTS

													PAG
PREFAC		•	•	•	•	•	•	•		•	•	•	ii
Introdu		•		•	•	•	•	•	•	•	•		1
		•		•		•	•	•	•	•	•		1
	r-places for reduction of the												1
Sel	ection of plates	•		•									2
Measure	ement of the plates .	•									•		2
Reducti	on					•			•			•	9
Ref	fraction									•			4
Ref	fraction terms of the second	order											4
Spl	nerical corrections and corre	ctions	for 1	efrac	tion						•		4
-	erration												4
Par	allax corrections												Į
For	mulæ used in the reduction	8											ŧ
	luctions to true place .												8
	ons to the Ephemeris of Er												8
	ion of the solar parallax												10
Svs	stematic errors					_			Ī	Ī	Ī	·	10
										-	·	·	13
The fins	sights	7	•	·			•	·	•	·	•	•	14
Inc mic	or varies or the solar parameter	-	•	•	•	•	•	•	•	•	•	•	-
			TA]	BLES	}								
T.	Meridian plate measures			_			_						18
	Meridian plate constants						-		_		-		28
	Meridian mean places, redu											•	32
	Meridian true places and C											•	35
v.	Parallax plate measures	_		•				•	·	•		•	38
	Parallax plate constants							·	:	•	•	•	67
	Parallax mean places, redu									rrecti	ons.	•	74
	Parallax true places and O											•	80
TY.	Star positions used in para	−∟ llov w	ork	•	•	•	•	•	•	•	•	•	86
	Selections of stars used in								•	•	•	•	88
	Derivations of corrections									•	•	•	89
	Positions of faint stars der							•	•	•	•	•	92
					• -			•	•	•	•	•	
APPEND	· · · ·							•	•	•	•	•	95
	scription of the Stackpole M							•		٠	-	•	95
	ole of Scale A of the Stackp						•	•	•	•	•	•	97
Tab	ole of Scale B of the Stackpo	ole Me	asur	ng E	ngine	)							98

# DETERMINATION OF THE SOLAR PARALLAX FROM PHOTOGRAPHS OF EROS MADE WITH THE CROSSLEY REFLECTOR OF THE LICK OBSERVATORY, UNIVERSITY OF CALIFORNIA.

By Charles D. Perrine.

#### INTRODUCTION.

Shortly after the lamented death of Director Keeler, I was asked by Director Campbell to take charge of all duties in connection with the Crossley reflecting telescope. Before any great amount of experience had been gained with the instrument I was under the necessity of making out a program for observing Eros for parallax. Fortunately, we still had the services of Mr. H. K. Palmer, who had assisted Professor Keeler in nearly all of his work with the reflector. His experience, enthusiasm, and ability throughout the trying conditions under which we worked on the Eros campaign made it possible to secure the observational material which was obtained.

The instability of the mounting of the telescope, which had given Keeler so much trouble in his work and about which he has written somewhat fully in his paper on the instrument, was the chief source of our difficulties. It was early recognized that the only feasible plan was to give exposures as short as would furnish sufficient comparison-stars within the region of good definition on the plates, make as many exposures as possible, and measure only the perfect images.

Observations were secured on every possible opportunity, even when the seeing was poor and the wind high. Round images were more desired than small ones. A complete account of the plates and of the conditions under which they were taken was printed in Lick Observatory Bulletin No. 13, and it seems unnecessary to repeat that account here.

All of the measurements and reductions of the Eros plates have been made by Mrs. Moore and Miss Hobe, Carnegie Institution of Washington assistants. It is a pleasure to testify to their ability and interest through the entire work.

#### GENERAL PLAN OF WORK.

Owing to the distance of Mount Hamilton from the other observatories taking part in the Eros solar parallax determination, it seemed advisable to plan so that the observations obtained there would be suitable for a determination of the parallax by themselves, rather than in combination with those of other stations. To this end the plan adopted embraced the taking of photographs at large hour-angles both east and west of the meridian. In addition to the plates for displacements of Eros, a series was secured on the meridian, for the determination of the errors of the ephemeris.

#### STAR-PLACES FOR REDUCTION OF THE PLATES.

Within the small fields of the Crossley plates there were not enough catalogue stars of any kind to furnish a basis for obtaining positions of Eros or of comparison-stars near Eros. It therefore became necessary to have recourse to star-places obtained from the

plates taken with the astrographic telescopes, which had much larger fields and for the reduction of which an especially planned list of stars was observed with meridian circles. In the preliminary investigations upon some of the Crossley plates it was necessary to have the places of sufficient stars for their reduction. On making a request to Director Loewy, the Paris Observatory measured and furnished the places of a list of stars for the purpose.

In his work of discussing star-places, Professor Hinks, of the Cambridge Observatory, kindly offered to include the stars required for the proper reduction of the Crossley plates. The Royal Observatory at Greenwich specially measured and reduced nearly 100 star-positions for use by Professor Hinks in his list for the Crossley plates. Needless to say, these star-places were an essential feature of our work, and our indebtedness to these sources is proportionately great.

In the reduction of the meridian plates, after the plate constants had been derived, the positions of all the comparison-stars were computed from the plate measures. These places were compared with the catalogue places and in a few cases where the discordances were large and the weights of the catalogue places small, the Crossley places were adopted for the parallax solution.

#### SELECTION OF PLATES.

For the determination of the absolute places of Eros, 3 of the best plates on each of 44 nights, or 129 plates in all, taken close to the meridian, were selected. These three plates contain, on the average, ten images, which should furnish a strong place of the asteroid. Only those images were measured which appeared to be perfectly round. Star-places for some of the dates at the beginning of the meridian series and also at the end were difficult to obtain. As they were not necessary in the parallax work, these dates were dropped.

For the parallax work, only those dates were selected which contained both east-and-west observations on the same night. It was necessary to discard five of these because of poor images. These restrictions necessarily reduced the amount of material, but in such cases only the good observations really justify measurement and reduction, and I believed that the result from carefully selected data would be stronger than if a considerable number of poor plates were included. Observations for which the parallax factors would be small were excluded for the same reason. The results obtained in the following discussion are based upon 281 plates on 18 nights; 823 selected images of Eros were measured.

#### MEASUREMENT OF THE PLATES.

All of the plates have been measured on the Harkness-Stackpole Engine belonging to the Lick Observatory. A very brief description of this engine is given in Publications of the Lick Observatory, vol. I, p. 76. A more detailed account is desirable and is appended. A considerable amount of preliminary investigation of the engine was carried out before any of the final measurements were made. The slides were tested and found to be sensibly straight. Micrometers were attached to the microscopes for reading the glass scales more accurately. A number of plates were measured in this way. It was soon found, however, that there were errors in the positions of the starimages themselves larger than the errors of the scale divisions and of reading the scales by the glass-reticle microscopes. When several settings were taken and plates measured in direct and reversed positions, it was found that such errors were sufficiently reduced

to bring them well below the errors of the images themselves. The scale-micrometers, were, therefore, discontinued. All measures were referred directly to the glass scales. without the intervention of a reseau.

The sky had previously been used as a source of illumination for the negative and the scales. Considerable difficulty was experienced from changes of intensity on cloudy days and late in the afternoons of clear days. Experimental plates were measured, using Rochester kerosene lamps, the sky light being screened off. The resulting measures showed no indication of any systematic effect and the method was adopted for the Eros plates. All of them have been measured under these conditions.

The general stability of the engine had been found to be good. The error of runs of the scale microscopes was very carefully adjusted to zero before beginning the work. This adjustment was tested frequently throughout the measuring, but required no change. The measurements of all plates were completed the same day on which they were begun.

The plates were measured in each of two positions, 180° apart. Three settings were made on Eros, then two settings on each of the comparison-stars in turn, then three more on Eros. This was the program for each of the sets of exposures selected. A complete measure rests upon 12 settings on Eros and 4 settings on each star. Settings were recorded to 0.0001 inch and the means taken to 0.00001 inch. Before the measured plate was removed from the engine, the differences were taken, the direct and reversed coördinates compared, and any discrepancies looked up.

The inclination of the slides was carefully determined on a number of days. The value of the angle between the left end of the X-slide and the farther end of the Y-slide was found to be  $89^{\circ}$  48' 30''. The form of the correction for inclination to be applied to the X-coördinates is, therefore,  $+ Y \sin I$ , where I is the deviation of the Y-slide from the true Y-axis.

The Y-coördinates theoretically require the small corrections introduced by the term cos I. The coördinates are all less than 1000', for which the correction is negligible. No plates or images have been rejected since the completion of the measures. During the work of measurement, a number of rejections of stars, images, and plates were made, when it was found that they were so bad as to weaken the result.

#### REDUCTION.

As the method of using photography for determinations of the highest precision is still in its infancy and can not be said to be on the same well-defined footing as the visual methods, and because there is a distrust of photographic results by some astronomers, it seemed desirable to take unusual precautions against peculiar errors in this work. To this end a plan of reduction was adopted which promised detection of errors peculiar to photographic methods, should they exist.

As the apparent motion of the asteroid between evening and the following morning observations was only about 8' to 10', it was possible to select the comparison-stars so that they would fulfill two conditions:

(1) The same stars would be used for both evening and morning reductions, thus eliminating to a great extent any errors of the star-places themselves. Such a selection of stars also permitted an investigation of the refractions and any possible distortion of the mirrors.

This procedure had the objection that if there were any optical distortion it would remain in part because the asteroid was eccentrically placed among the stars, in opposite directions at the two elongations. To test this point, a different selection was adopted, so that —

(2) The stars would be as symmetrically placed about the asteroid as possible. This selection also had the advantage of reducing any effect on the scale value and orientation due to errors in the places of the comparison-stars.

The two different methods furnished in addition a valuable check on the numerical work. The measures of the images selected on each plate were combined and reduced as a whole. By using the center of gravity of the comparison-stars, as origin, it became possible to simplify the reduction of the individual plates. Instead of reducing each plate directly to the system of stars, a system of standard rectangular coördinates was first derived from all of the plates of a group (evening or morning) by taking their means after having corrected for refraction. The scale value and orientation corrections necessary to reduce each plate to the standard were then easily obtained, in rectangular coördinates. The constants necessary to reduce the standard coördinates to the star system were then obtained and the data necessary for the complete reduction of the group of plates were available. This plan was followed in all except a very few cases where it was necessary to reduce one or two plates directly to the star system on account of a change in the position of the optical axis.

The same plan of reduction was used for the meridian observations.

#### REFRACTION.

The ranges of temperature and air-pressure were both small during the observations, and it was found, upon investigation, that a constant value of each could be used in computing the refraction corrections, without introducing any appreciable error into the final result. The refractions were therefore computed for a temperature of  $+55^{\circ}$  F. and an air-pressure of 26.00 inches.

#### REFRACTION TERMS OF THE SECOND ORDER.

According to the criterion developed by Rambaut, the refraction terms of the second order for a zenith distance of  $60^{\circ}$  do not amount to 0''. As the greatest distances measured on the Eros plates are under this, and as the reductions are made to two decimal places, it is not necessary to consider refraction terms beyond the first order.

#### SPHERICAL CORRECTIONS AND CORRECTIONS FOR REFRACTION.

As it was desired to compare the east-and-west plate-measures as early as possible in the process of reduction, with the view of detecting optical distortions, etc., the refraction corrections were applied in the *rectangular* form as given by Turner. The spherical corrections were computed by Jacoby's expansions, but on account of the above method of correcting for refraction, it was necessary to use the *apparent* center of the plate, as origin, instead of the *true* center, in applying the spherical corrections.

#### ABERRATION.

An investigation has shown that the maximum effect of differential diurnal aberration which can occur under the conditions of the Eros parallax work, in the limited field of the Crossley reflector, is so small, when a number of stars are used, as to be insensible. Furthermore, any residuals of this kind become of an *accidental* order and are entirely eliminated in a series of sufficient length.

#### PARALLAX CORRECTIONS.

The parallax corrections were computed with the value 8".80; the value of  $\log \rho$  used was 9.9995455, which is the value for the Crossley reflector including the altitude of the instrument above sea level.

#### FORMULÆ USED IN THE REDUCTIONS.

For convenience of reference the various formulæ used in the investigation are here collected.

The formulæ for parallax take the well-known form:

$$\alpha - \alpha' = \frac{8.80 \rho \cos \phi'}{\Delta} \frac{\sin t}{\cos \delta} = \pi$$

$$\delta - \delta' = \frac{8.80 \rho}{\Delta} (-\sin \delta \cos \phi' \cos t + \cos \delta \sin \phi')$$

where  $\log \rho = 9.9995455$  and the parallax factor = 15  $\cos \delta \frac{\pi}{8.80}$ .

The refraction terms (for each star) are as follows:

$$M_x = k'(1 + H^2) \sin 1''$$
  $N_x = M_y = k' \cdot G \cdot H \sin 1''$   $N_y = k'(1 + G^2) \sin 1''$  where

$$\tan N = \cot \phi \cos t$$
  $G = \cot (\delta + N)$ 

$$H = \operatorname{cosec}(\delta + N) \tan t \sin N$$
  $k' = (\text{photo-visual}) \alpha' B^{A} \gamma^{\lambda} \text{ (Bessel's tables)}$ 

The rectangular coördinates,  $X_0$  and  $Y_0$ , of each comparison-star as referred to Eros are measured and the corrected values X and Y found by

$$X = X_0 + Y_0 \sin I + M_x X_0 + N_x Y_0$$
  $Y = Y_0 + M_y X_0 + N_y Y_0$ 

where I is the angle of inclination of the slides of the measuring engine.

From the values of X and Y thus secured the coördinates of the center of gravity of the group of comparison-stars are determined for each plate by:

$$C = \frac{X_a + X_b \cdot \cdot \cdot X_n}{\nu} \qquad K = \frac{Y_a + Y_b \cdot \cdot \cdot Y_n}{\nu}$$

where  $\nu$  = number of comparison-stars.

With these values of C and K new coördinates for the comparison-stars from the center of gravity were found for each star as follows:

$$X_a - C = X'_{ac} \cdot \cdot \cdot X_n - C = X'_n$$
  $Y_a - K = Y'_{ac} \cdot \cdot \cdot Y_n - K = Y'_n$ 

For all "east" plates and for all "west" plates on a particular date these new coördinates were combined in a "standard" plate by

$$\frac{X'_{a_1} + X'_{a_2} + \cdots X'_{a_n}}{n} = X_{a_s} \qquad \frac{Y'_{a_1} + Y'_{a_2} + \cdots Y'_{a_n}}{n} = Y_{a_s}$$
(for comparison-star a)

and similarly for each comparison-star "east" or "west," giving a fictitious plate of stars whose coordinates are the means of those stars for the individual plates.

The polar coördinates of the stars (as furnished by Hinks) are reduced to the center of gravity of the system in the following manner: the mean of the "east" X and Y coördinates of some star near Eros are converted into  $\alpha$  and  $\delta$  by

$$\Delta \delta = s_b Y$$
, and  $\Delta \alpha = \left(\frac{s_a}{15}\right) \times \sec \delta_{\text{Eros}}$   
 $\delta_{\text{Eros}} = \delta_{\text{star}} + \Delta \delta$ , and  $\alpha_{\text{Eros}} = \alpha_{\text{star}} + \Delta \alpha$ 

whence

In the above,  $s_a$  and  $s_b$  are the values of scale A and scale B respectively. From these values the apparent  $\alpha$  and  $\delta$  of Eros were obtained by

$$\Delta \alpha' = -\frac{1}{15} k' \operatorname{cosec}(\delta + N) \cot N \sec \delta_{\ell} \qquad \Delta \delta' = -k' \cot(\delta + N)$$

and

$$\alpha_{\text{app.}} = a_t - \Delta \alpha'$$
 $\delta_{\text{app.}} = \delta_t - \Delta \delta'$ 

If there is any appreciable spherical correction due to the chosen star not being close enough to Eros that also is applied.

Having the apparent  $\alpha$  and  $\delta$  of Eros, the differences  $\Delta\alpha$  and  $\Delta\delta$  between Eros and the individual stars are derived; with these values the curvature corrections  $[A'']_{\alpha}$ ,  $[D'']_{\alpha}$ , etc., are taken from tables computed in accordance with the formulæ given in the Lick Observatory Bulletin 4, 78 (1906); these are applied to the individual stars giving places freed from curvature.

 $[A'']_{a}$ ,  $[D'']_{a}$ , etc., are the sums of all of the sensible terms of the curvature corrections, computed by the following formulae:

For  $X \sec \delta$ 

$$\begin{array}{lll} A_1'' = A_1 \; (X \sec \delta) \; Y & A_2'' = A_2 \; (X \sec \delta) \; Y^2 & A_5'' = A_8 \; (X \sec \delta)^8 \\ A_4'' = A_4 \; (X \sec \delta)^8 \; Y & A_5'' = A_5 \; (X \sec \delta) \; Y^8 & A_6'' = A_6 \; (X \sec \delta)^8 \; Y^2 \\ A_7'' = A_7 \; (X \sec \delta)^5 & A_8'' = A_8 \; (X \sec \delta) \; Y^4 \end{array}$$

For Y

$$\begin{array}{lll} D_1{}'' = D_1 \; (X \sec \delta)^2 & D_2{}'' = D_2 (X \sec \delta)^2 \; Y & D_6{}'' = D_8 \; Y^8 \\ D_4{}'' = D_4 \; (X \sec \delta)^2 \; Y^2 & D_5{}'' = D_6 \; (X \sec \delta)^4 & D_6{}'' = D_6 \; (X \sec \delta)^4 \; Y \\ D_7{}'' = D_7 \; (X \sec \delta)^2 \; Y^8 & D_8{}'' = D_8 \; Y^6 \end{array}$$

The auxiliary quantities  $A_1$ , etc.,  $D_1$ , etc., are computed by the following formulae:

The logarithms of the constant quantities are given in brackets.

The corrected star-places are now reduced to the center of gravity separately for "east" and "west" by

$$\alpha_c = \frac{\alpha_a + \alpha_b + \cdots + \alpha_n}{\nu} \qquad \qquad \delta_k = \frac{\delta_a + \delta_b + \cdots + \delta_n}{\nu}$$

and, for each star,

$$\alpha_a - \alpha_c = x \sec \delta$$
  $\delta_a - \delta_k = y$ 

The rectangular coördinates of the "standard" plates are next converted into polar coördinates by means of the adopted values for scale A and scale B; then a comparison is made of these plate coördinates with the star coördinates:

$$n_x = X_{a_s} \frac{S_a}{15} \sec \delta_t - x \sec \delta$$
  $n_y = Y_{a_s} \cdot s_b - y$ 

Using the values

$$\pi = X_{a_a} \frac{s_a}{15} \sec \delta \cdot 15 \cos \delta \qquad \rho = Y_{a_a} \cdot s_b$$

$$n'_x = \left( X_{a_a} \cdot \frac{s_a}{15} \sec \delta - x \sec \delta \right) 15 \cos \delta \qquad n_y = Y_{a_a} \cdot s_b - y$$

the equations

$$\pi p + \rho r + n_x' = 0 \qquad \qquad \rho p - \pi r + n_y = 0$$

are formed, where p and r are the corrections to be found to the adopted values of the scale and the orientation.

Letting

$$A = \lceil \pi \pi \rceil \qquad E = \lceil \rho n_x' \rceil \qquad C = \lceil \pi n_x' \rceil \qquad C' = \lceil \rho n_y \rceil \qquad D = \lceil \rho \rho \rceil \qquad E' = -\lceil \pi n_y \rceil$$

the corrections to scale value and orientation are derived for the "standard" plate,

$$p_{\bullet} = -\frac{C - C'}{A + D} \qquad r_{\bullet} = -\frac{E + E'}{A + D}$$

Next are derived the values p' and r' of the individual plates reduced to the "standard"; this is done precisely as above, except that there is no reduction to polar coordinates, giving

$$n_x' = X_{\text{plate}} - X_{\text{standard}}$$

$$n_{\rm w} = Y_{\rm plate} - Y_{\rm standard}$$

$$n_y = Y_{\text{plate}} - Y_{\text{standard}}$$
  $\pi p_p + \rho r_p + n'_x = 0$ , etc.

and for any plate

$$p = p_s + p_p \qquad r = r_s + r_p$$

Applying these corrections to the center of gravity coordinates (transformed to polar) in the following form

$$C + \rho C + \frac{1}{15} r K \sec \delta = \Delta \alpha_{Eros}$$
  $K + 15 r C \cos \delta + \rho K = \Delta \delta_{Eros}$ 

gives the desired right ascension and declination of Eros:

$$\Delta \alpha + \alpha_{\mathrm{center of gravity}} = \alpha_{\mathrm{Eros}}$$
  $\Delta \delta + \delta_{\mathrm{center of gravity}} = \delta_{\mathrm{Eros}}$ 

This is done independently for "east" and "west" plates. These coördinates must be reduced to apparent place to compare with the computed value. To make the  $\alpha$  comparable the equations

$$\alpha_{\rm Eros} + \Delta \alpha' + \pi$$

are formed for each plate, where  $\Delta \alpha'$  is composed of  $\Delta \alpha$  from Circulaire 9, p. 191, and  $+ h' = \frac{1}{15} \sec \delta \sin(H + \alpha)h$  (that part of the regular apparent place reduction omitted from  $\Delta \alpha$ ).

For each plate a value of  $\alpha$  is interpolated from Millosevich's ephemeris. This is corrected by terms due to the obliquity of the ecliptic and perturbations. For the "west" plates an additional correction is applied, due to the fact that the meridian plates afford a correction to Millosevich's ephemeris, and is obtained by multiplying the intervals between "east" and "west" plates by the correction to the ephemeris over those periods. Thus we derive for the  $\alpha$  ephemeris

$$\alpha_{\text{ephemeris}} = \alpha_{\text{Millosevich}} + (\text{interval} \times \text{correction to ephemeris}) + (\text{obliquity correction}) + (\text{perturbation correction})$$

A comparison of these values with the observations gives a series of values of Obs.-Eph. for "east" and "west" plates on each date. The "east" and "west" values are now combined and multiplied by the parallax factor, giving

$$\frac{(E-W)'' \text{ 15 } \cos \delta}{\Sigma \pi f} = \Delta \pi_0$$

where

E and W = differences Obs.-Eph. in seconds of arc.

 $\Sigma \pi f = \text{sum of parallax factors for the plates combined.}$ 

 $\Delta \pi_0$  = the correction to the value 8.80".

From the extensive literature relating to formulæ and methods used in reducing photographic plates, the following titles, in addition to those quoted in the text, are given as bearing most closely upon the present research:

- H. H. Turner. Preliminary note on the reduction of measures of photographic plates. Monthly Notices, 54. 11.
- H. Jacoby. Comparison of methods for the reduction of star-photographs. Astronomical Journal, 22, 81.
   On the reduction of stellar photographs, with special reference to the astro-photographic chart plates.
   Columbia Observatory Contributions, No. 10.
- Tables for the reduction of astronomical photographs. Columbia Observatory Contributions, No. 23. C. D. Perrine. How to obtain the position of a star from a photograph. Popular Astronomy, 15, 259.
- ---- Preliminary note on some simplifications in the reduction of stellar photographs. Lick Observatory Bulletin, 4, 77 and 99.

#### REDUCTIONS TO TRUE PLACE.

In the reductions to true place the aberrations were computed with data derived from the American Ephemeris for 1900, the precessions and nutations being taken from Circular No. 9 of the "Conference Astrophotographique Internationale de Juillet, 1900."

To render the observations and ephemeris homogeneous, the reductions to Newcomb's value of the obliquity, as published by Witt in Circular 12 of the "Conference Astrophotographique Internationale de Juillet, 1900," have been applied.

#### CORRECTIONS TO THE EPHEMERIS OF EROS.

The deviations of Eros from the ephemeris in Circular No. 9 of the "Conference Astrophotographique Internationale de Juillet, 1900," were derived from the observations made near the meridian. Each final position used is the mean of from ten to twelve images.

An inspection of the charted residuals in right ascension showed some evidence of a periodic inequality. The residuals of the intervals

Oct. 5 to 10, inclusive Nov. 9 to 13, inclusive Nov. 23 to Dec. 12, inclusive can be represented much better by a curve whose double amplitude is 0.05 and period about 9 days than by a straight line. The accompanying reproduction of the chart will make this clear.

It should be noticed, however, that the interval from Oct. 12 to Nov. 5 inclusive, over which observations are fairly well distributed, does not show any periodicity of this kind. In fact, these residuals are satisfactorily represented by a straight line. The first possibility examined in search for an explanation was that of a connection with the light period of  $2^h$   $38^m$  found by Oppolzer. 82 periods of  $2^h$   $38^m$  very nearly equal 9 days, hence the relation might be to the shorter period, where daily observations only are used. Comparison over the entire period of 79 days covered by the observations showed a lack of synchronism. Comparison was then made with the period of  $2^h$   $38^m$ , using a separate epoch for each group. This comparison showed strong evidence of some relation to a period of about that length. The accompanying diagrams will make plain the apparent connection.

It seemed very desirable, if not absolutely essential, that the light variations of Eros during the period covered by these observations should be utilized in this connection,

before making further attempt to locate the cause of an apparent connection with a period approximating closely to that of the brightness variation. Efforts have been made to secure the unpublished photometric observations of Eros made in 1900 at other observatories, but they are not yet available.

A careful examination was made to see if there was any relation to the Moon. While the three maxima observed fall pretty close to maxima of the nutation term, the length of the Eros period appears to be 9 days instead of 14, as in the nutation. This length of period seems pretty well established from the interval Nov. 23 to Dec. 12, where two complete periods are well outlined. There does not appear to be any indication in these observations of an error in the assumed mass of the Moon.

It seems very unlikely that there should be any relation to the very small term in which 3 C appears.

On the whole, it appears more probable that the inequality is connected with the variation of light in some way. This explanation has grave difficulties also, for the asteroid presented no sensible disk and the most ready explanation would be one of varying surface brightness.

Failing to find a satisfactory explanation, the reality of the periodic inequality may be questioned, although appearances certainly favor its genuineness, particularly in the first and last intervals. It is difficult to see how so many observations can be so well represented by a curve, simply on the doctrine of chance, to say nothing of the probable accuracy being greater than would be shown by the residuals on the assumption of a straight line.

The declination residuals were then plotted to see if they would throw any light on the matter. The residuals in the first interval from Oct. 5 to 10 require a curve similar to that found for the right ascensions of the same interval, to represent them. There are also some evidences of a similar periodicity throughout the other two intervals, although not nearly so well marked as in the right ascensions.

Comparison was also made with all of the available residuals published by other photographic observers of Eros, which showed that the Crossley residuals all fall inside the belt formed by such observations. The total of the observations fails to disclose any such periodicity. Various other possible sources were considered, such as the plate-constants, refraction, displacements in a secondary orbit, etc., but no reasonable explanation has been found. A similar systematic error in the star-places would be carried through the work, but that seems impossible. In view of these facts, the deviations have been treated as accidental, for the present, in deriving the corrections to the ephemeris.

The daily variations found in the ephemeris right ascensions during three intervals, covering our parallax dates, are:

Oct. 6 to 29	in	clu	siv	e.	•		•	•	•			•			0071
Nov. 3, 10			٠.							•	•				.0000
Nov. 28 to	De	c. :	24	inc	lusi	ve									+ .0041

These values were used in our parallax derivations. An examination of the parallax dates, with respect to the possible effect of any such periodic inequality in the motion of Eros if of 9-day period, shows that the observations are so numerous and so distributed that but little effect can enter, even if such a periodic inequality is real. If the connection should be with the short light period, it is also probable that the observations are numerous enough to eliminate any serious effect in the final result.

#### DERIVATION OF THE SOLAR PARALLAX.

The change in the ephemeris correction during the interval between evening and morning observations was applied before deriving the correction to the solar parallax. The parallax corrections were derived, as nearly as possible, from pairs of plates, one evening with one morning plate, with the view of showing the agreement between small groups of observations, and for check purposes. The details of the derivation will be evident from the table containing the data. In accordance with preliminary investigations made by us and other astronomers, it did not seem justifiable to include in the solution any other unknowns than that of the parallax.

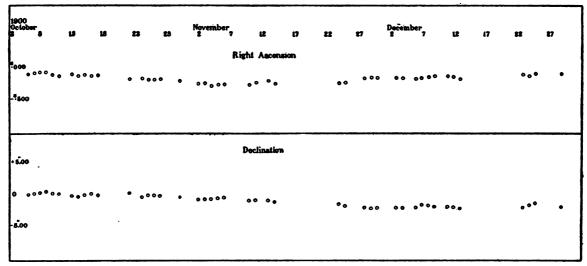


Fig. 1. - Position inequality of Eros.

As the correction to the ephemeris has been carefully determined and made use of, it does not seem worth while to include terms depending upon uncertainties in any of the elements of the orbit of Eros. The derivation of the parallax has been based wholly upon the displacements in right ascension, as 0.97 of the total parallactic displacement is in this direction, and because of the smallness of the displacement in declination at this latitude. The inclusion of any declination results would not have strengthened the determination.

Before proceeding to a final discussion of the results, a short investigation of the possible sources of systematic error is pertinent.

#### SYSTEMATIC ERRORS.

The most probable sources of systematic error appeared to be the following:

- I. Distortions in the figure of the great mirror of the telescope due to the extreme hour angles at which the displacement negatives were made.
- 2. Errors in the refraction constant.
- 3. Radial distortion (aberration) of the star-images.
- 4. The periodic light variation of Eros.
- 5. The suspected periodic inequality of position of Eros.

(1 and 2) Sources 1 and 2 would, if present, probably reveal themselves in a similar manner, and they have been considered together.

As already explained, two methods of reduction, particularly adapted to testing some of these points, were adopted. These two systems of reduction give us three ways of investigating such systematic errors as the two mentioned.

- (a) By a direct comparison of the measured coördinates east and west with each other and with the meridian group;
- (b) By a comparison of the plate constants derived from each of the two solutions; and
- (c) By an examination of the parallax results themselves.
- (a) In the first solution the same stars are used both east and west, and their coördinates derived from the center of gravity of the group. After the rectangular measures of such groups and that of the meridian groups have been freed from the effects of refraction and referred to the same coördinate axes, they are suitable for investigating this question without further reduction. For this purpose the sums of the standard coördinates for each elongation and for the meridian have been obtained. As only the X coördinates have been used in the parallax determination, it is these alone with which we shall concern ourselves. If there are no systematic errors, such as in the assumed refraction, distortions, and the like, the sum of the east group should agree exactly with those of the west and meridian groups.

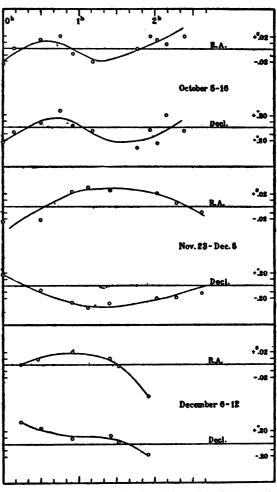


FIG. 2. — Comparison of position inequality of Eros with period of light variations — 2<sup>h</sup> 38<sup>m</sup>.

As a preliminary, these sums were tabulated before any attempt was made to reduce them to a common scale value or orientation. The resulting comparison showed such small differences, with no indications of system, that it was not deemed necessary to go to the labor of a complete reduction. These unreduced results are given in the table on page 12. The unit is one inch. The fifth (last) decimal place corresponds almost exactly to hundredths of seconds of arc. The column E-W, therefore, may be considered as such.

When we consider that each difference in the column E-W contains the errors of from 6 to 10 distances, as well as the effect of scale value and orientation, we must allow that they are small and do not show any evidence of distortion and refraction such as we have been seeking. All of these differences would probably be diminished by a complete reduction.

(b) As the plate constants rest upon measures made in both coördinates, this test contains the additional element of the declination measures. A comparison of these constants confirms the conclusion reached in (a), viz., that there is no evidence of distortion of the mirror or of errors in the refraction constant employed.

DATE.	East.	Meridian.	WEST.	E-W.
	in.	in.	in.	
Oct. 6	1.80276	1.80321	1.80365	- 89
12	1.86327		1.86391	- 64
13	2.19286	2.19391	2.19339	- 53
14	1.75576	1.75548	1.75510	+ 66
15	2.29890	2.29965	2.29862	+ 28
16	1.80555	1.80538	1.80652	- 97
21	2.08389	2.08479	2.08364	+ 25
24	2.66303	2.66541	2.66520	-217
<b>2</b> Ġ	1.30517		1.30484	+ 33
29	2.58931	2.59019	2.58891	+ 40
Nov. 3	1.79189		1.79309	-120
10	2.21430	2.21509	2.21370	+ 60
28	2.55749	2.55747	2.55823	- 74
29	3.21513	3.21237	3.21552	- 39
Dec. 5	1.84737	1.84762	1.84652	+ 85
5	2.34865	2.34866	2.34918	- 53
7	1.56439	1.56393	1.56415	+ 24
24	2.11772		2.11608	+ 74

Sums of East, Meridian, and West Rectangular Coordinates.

(c) The zenith distances at which the observations were made were larger in the evening than in the morning, at the beginning of the series. The zenith distances changed until, at the end of the series, they were larger in the morning than in the evening.

The values of the parallax derived from the first and second halves of the period should show a change if any errors of the nature of 1 and 2 exist.

An examination shows no greater difference than is to be expected.

(3) On account of the very limited field in the Crossley plates over which the starimages are round, it is perhaps a question whether even in the field used there may not be radial aberrations which can not be detected by the eye, but which would result in systematic error, and which might be detected in a long series of observations. A systematic effect of this sort should be revealed by a comparison of the plate constants for the two solutions. The following are the differences, without respect to sign, between the constants of the east and west groups of the entire 18 equations, in units of the sixth decimal place, for both solutions:

SOLUTION.	Scale Value.	ORIENTATION.
First Second	8267 6943	16086 21195

The scale value is a little more accordant in the second solution, whereas the orientation is more accordant in the first solution. The absolute values of the constants given above are of little importance, as they are affected by a variety of conditions which are almost entirely eliminated in the solution. There appears, therefore, to be no indication of any systematic effect from radial aberration. This conclusion is confirmed by the close agreement of the parallax derived from the two independent solutions.

(4) By arranging the values of the parallax in the order of their derivation from the light period, any dependence upon that cause should be shown. Such arrangements show no relation.

(5) As has already been pointed out, there should be little effect on the derived parallax, even should a periodic inequality of position be confirmed.

#### WEIGHTS.

The only grounds upon which weights have been assigned are:

- A. The number of images of Eros and of the comparison-stars concerned in an equation.
- B. The sizes of the parallax factors (relative inverse distances of Eros at the times of observation).

The errors of observation remaining constant, their effect on the resulting parallax will vary as the inverse distance of the asteroid at the time of observation. It is well known, however, that the accuracy of a result is not directly proportional to the number of plates or images concerned. As an experiment, three systems have been used, namely, unweighted, square root of weights, full weights.

Solutions have been made also according to certain arbitrary but reasonable assumptions. The results of the various assumptions and combinations are here given in tabular form:

1	SOLUTION I.	SOLUTION 2.
U nweighted.	,,	"
126 equations (all)	+.0086	+.0070
20 equations (rejecting o"100 and over)	+.0003	
122 equations (rejecting o"100 and over)		+.0093
96 equations (rejecting o"050 and over)	+.0057	
92 equations (rejecting o. o50 and over)	• • • • •	+.∞56
18 dates	+.0034	+.0031
18 dates (rejecting large — value on Oct. 13)	+.0058	+.0050
Simple mean of above	+.0066	+.0060
Weighted — Square Root of Weights.		
126 equations (all)	+.0109	+.0005
20 equations (rejecting o"100 and over)	+.0115	
122 equations (rejecting o", 100 and over)	•••••	+.0114
96 equations (rejecting o o o and over)	+.0067	
92 equations (rejecting o	• • • • •	+.0065
18 dates (all)	+.0041	+.0039
18 dates (rejecting large - value on Oct. 13)	+.0062	+.0056
Simple mean of above	+.0077	+.0072
Full Weights.		
r 26 equations (all)	+.0130	+.0118
18 dates (all)	+.0047	+.0047
18 dates (rejecting large - value on Oct. 13)	+.0065	+.0061
Simple mean of above	+.0081	+.0075
General mean, all three weights	+.0074	+.0060

An examination of the results of the different assumptions shows a systematic difference between the value derived from equations and dates. This difference is due to the excess of large positive corrections over large negative corrections on the dates giving large systematic values of the correction. It is also accentuated by a large negative correction on Oct. 13, an equation which we would probably be justified in rejecting altogether. Hence it seems certain that the equations (including these large values)

give too large a result, and that the dates (including the large negative value on Oct. 13) give too small a value of the parallax.

In my opinion, the square root of the product of parallax factors and of the number of images is the most reliable weight. The final value is based on such weights.

#### THE FINAL VALUE OF THE SOLAR PARALLAX.

The slight differences between the results of so many combinations seem to make it unnecessary to go into further refinements of weighting and selection. If we take the simple mean of the four values derived respectively from all equations, equations under 0.050, all dates (Oct. 13 revised), weighted by the square root, we find values which differ but slightly from those based on any of the other reasonable assumptions. I therefore consider the following as the most probable values of the solar parallax from the two solutions:

Solution 1   8.80   +.0070   Solution 2   8.80   +.0064		Solution 1 . Solution 2 .	•	•	:		,, 8.80 8.80	+.0070 +.0064
---	--	------------------------------	---	---	---	--	--------------------	------------------

As there seems to be no good reason why one of these values should be given greater weight than the other, the simple mean, + 0.0067, is adopted as the final result, making the value of the solar parallax

#### $\pi = 8''.8067 \pm 0''.0025$ .

The assigned probable error is not the result of any single assumption, but is estimated from the probable errors derived in several ways, as follows:

P.E., 126 equations.	•			•					•		•	•	•	•	±¢	0,0027
96 equations.	•	•	•	•	•			•	•	•	•	•	•	•	±	.0018
18 daily means																
15 daily means																
8 results used	in	fina	ıl c	om	bin	ati	on			•	•				±	.0018

After the reduction of the measures and the derivation of the parallax, the plates (20 in number) showing the largest discordances were completely remeasured and re-reduced. To test five of these results still farther, a third set of measures and another complete reduction of the five were made. The measures generally reproduced the original results very closely. The substitution of the twenty remeasured results would have changed the parallax by only 0.0005. This was considered a valuable check on the early measures of these plates and on the reliability of all the measures. Only the original measures have been used in the final discussion.

TABLE I. - MERIDIAN PLATE MEASURES.

PLATE No.	STAR.	P. S. T.	x	у	Plate No.	STAR.	P. S. T.	x	у
84	a b c d e f g h	13 34 47	Oct. 5 - 18102 - 14504 + 3167 + 5054 + 5991 + 10853 + 9596 + 53862	C -66975 + 8777 +28141 -46246 -18790 + 7707 +43605 + 8426	110	a b c d e f g h	13 37 47	Oct. 7 - 65483 - 51954 + 1136 + 4204 + 7913 + 9406 + 25238 + 53657	C - 34620 + 33320 + 18776 - 70299 - 70398 + 36598 - 25115 - 18697
85	a b c d e f g h	I3 44 47	Oct. 5 - 17886 - 14369 + 3308 + 5202 + 6136 + 11001 + 9714 + 53983	H -67911 + 7873 +27222 -47160 -19698 + 6795 +42711 + 7523	112	a b c d e f g	13 50 11	Oct. 7 - 65241 - 51726 + 1359 + 4442 + 8152 + 9634 + 25493 + 53895	H - 35748 + 32198 + 17663 - 71427 - 71516 + 35487 - 26234 - 19827
90	a b c d e f g h	14 15 0	Oct. 5 -17594 -13990 + 3708 + 5555 + 6526 +11404 +10137 +54411	C -70677 + 5107 + 24426 - 49947 - 22494 + 4003 + 39888 + 4698	113	a b c d e f g h	13 53 24	Oct. 7 - 65208 - 51640 + 1424 + 4462 + 8173 + 9672 + 25512 + 53913	C - 36019 + 31898 + 17366 - 71722 - 71803 + 35186 - 26521 - 20119
98	a b c d e f g h i	13 34 15	Oct. 6 - 19675 - 20829 - 17707 - 2857 + 5971 + 11472 + 17685 + 35361 + 53800	H -38712 +27682 +7308 +19307 -28433 -58252 +41466 -31576 +4330	117*	a b c d e f g	13 36 0	Oct. 8 - 13489 + 10518 + 3522 + 18198 + 27629 + 29374 + 37600 + 58712	H + 15002 - 7470 + 20279 - 10951 + 13547 + 25599 + 31155 - 6774
100	a b c d e f g h	13 43 1	Oct. 6 - 19545 - 20696 - 17577 - 2719 + 6105 + 11595 + 17827 + 35485 + 53927	C -39484 +26894 +6521 +18520 -29227 -59935 +40668 -32356 +3534	118*	a b c d e f g h	13 40 54	Oct. 8 - 13390 - 10402 + 3629 + 18306 + 27733 + 29488 + 37718 + 58814	C + 14586 - 7914 + 19827 - 11392 + 13095 - 25147 + 30708 - 7228
102	a b c d e f g b	13 57 6	Oct. 6 - 19284 - 20478 - 17338 - 2503 + 6322 + 11840 + 18025 + 35703 + 54116	H - 40775 + 25591 + 5204 + 17226 - 30515 - 60308 + 39371 - 33619 + 2266	119	a b c d e f g h	13 50 0	Oct. 8 - 13185 - 10191 + 3832 + 18541 + 27950 + 29698 + 37920 + 59043	H + 13560 - 8911 + 18837 - 12369 + 12101 + 24162 + 29721 - 8200

<sup>\*</sup> These times have been changed from the records as published in Lick Observatory Bulletin No. 13 by +2m.

TABLE I. - MERIDIAN PLATE MEASURES - Continued.

PLATE No.	STAR.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	x	у
140.					140.				
122	a b	13 27 0	Oct. 9 - 11617 - 9165	C + 17963 - 25604	131	a b	13 36 8	Oct. 10 - 50186 - 40530	H + 1500 - 6296
	c d		- 5167 - 4648	+ 18448 6066		, c d		-35170 -10733	+ 11224 - 19313
	f		- 6051 + 1442	-66147 + 1032		e f		- 4674 + 25355	+43108 - 1772
	g		+ 5270	+ 34224		g		+ 39239	- 26992
	h u		+ 9007 + 13820	- 6744 - 40660		h		+ 70482 + 1288	- 32759 + 3625
	X <sub>1</sub>		+ 7849	-31974 $-28853$					
	y		+ 9337 + 20662	-2565I					
	Z		+ 22166 Oct. 9	-33569 C				Oct. 12	С
123		13 30 11	- 11550	+ 17705	142*		13 45 23	-41516	+ 25482
	b		- 9098 - 5071	- 25862 + 18204		b		- 20118 - 11380	+ 26746 + 263
	đ		- 4559	- 6324		d		- 8o18	-48759
	f		- 5996 + 1522	-66417 + 764		f		+ 13732 + 19667	+ 1501 -64355
	g h		+ 5361	+ 33975		g		+ 68942	+ 12602
	u		+ 9082 + 13901	- 7020 -40939					
	X <sub>1</sub>		+ 7911 + 9415	- 32246 - 29184					
	y		+ 20750	- 25909					
	Z		+ 22222 Oct. 0	-33856 H				Oct. 12	
125	8	13 40 47	-11282	+ 16759	143*		13 48 5	-41411	H + 25298
	b c		- 8832 - 4825	- 26798 + 17234		b		- 20008 - 11272	+ 26522 + 78
:	đ		- 4312	- 7278		đ		- 7966	<b>-49051</b>
	f		- 5702 + 1776	- 67363 - 183		f		+ 13802 + 19690	+ 1337 -64646
	g h		+ 5593	+ 33046		g		+ 69003	+ 12378
	u.		+ 9338 + 14182	- 7957 -41882					
	X <sub>1</sub>		+ 8206 + 9697	— 33188 — 30030					
	z		+ 22506	-34795					
129		13 29 43	Oct. 10 - 50372	H + 2067	144*	a	13 51 23	Oct. 12 -41308	C + 25029
129	b	-3 -9 +3	- 30372 - 40726	- 573 <sup>2</sup>	144	b	13 31 23	- 1990I	+ 25029
	d		-35359 -10890	+ 11783 - 18759		c d		- 11175 - 7836	- 230 - 49268
	•		- 4853	+ 43683				+ 13912	+ 1036
	f g		+ 25162 + 39045	- 1187 - 26443		f		+ 19813 + 69112	64868 -+ 12080
	h		+ 70294	-32220				, •	·
	X		+ 1089 Oct. 10	+ 4208 C				Oct. 13	н
130	a b	13 33 0	- 50296 - 40626	+ 1804 - 6003	156	a b	I3 7 43	-55474	-44566
	C		- 40636 - 35277	+ 11537		C	,	- 54683 - 12432	+ 2145 + 24963
	d e		- 10823 4742	- 19032 + 43410		d •		+ 4170 + 11705	- 59295 + 14039
	f		+ 25260	- 1492		f		+ 20641	-32341
	g h		+ 39128 + 70377	- 26736 - 32501		g h		+ 25243 + 26364	+ 777 + 36854
	x		+ 1287	+ 3936				0-4	. 0 - 37

<sup>\*</sup> These times have been changed from the records as published in Lick Observatory Bulletin No. 13 by +1m.

TABLE I. — MERIDIAN PLATE MEASURES — Continued.

PLATE No.	STAR.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	y
157	a b c d e f g	13 11 15	Oct. 13 - 55425 - 54576 - 12297 + 4251 + 11827 + 20760 + 25386 + 26524	C -44876 + 1860 + 24659 - 59634 + 13716 - 32679 + 463 + 36527	204	a b c d o f g h	12 56 11	Oct. 15 -38691 -24299 - 6068 - 5877 + 12360 + 18645 + 38807 + 42752 + 52366 + 7586	C - 33587 - 14974 - 20248 + 16844 + 41894 - 46666 - 39620 - 4079 + 5846 - 43109
160	a b c d e f	13 25 11	Oct. 13 - 54901 - 54062 - 11770 + 4724 + 12350 + 21224 + 25884 + 27041	C -46038 + 696 +23514 -60754 +12594 -33807 - 678 +35394	205	a b c d e f g h i	12 59 0	Oct. 15 - 38559 - 24179 - 5921 - 5770 + 12421 + 18803 + 38955 + 42879 + 52498 + 7735	H - 33834 - 15217 - 20474 + 16625 + 41628 - 46885 - 39794 - 4259 + 5686 - 43347
180	a b c d o f g h	13 1 47	Oct. 14 - 51882 - 27038 - 13498 - 12049 - 6420 - 1314 + 14240 + 17169 + 38826	C - 34702 - 13495 - 61629 + 876 + 42001 + 18757 - 21154 + 44900 - 3233	207	a b c d e f g h i	13 11 0	Oct. 15 - 38039 - 23667 - 5414 - 5269 + 12937 + 19309 + 39436 + 43373 + 52986 + 8222	C - 34782 - 16164 - 21452 + 15654 + 40700 - 47814 - 40726 - 5232 + 4687 - 44285
181	a b c d e f g h	13 6 0	Oct. 14 - 51752 - 26875 - 13360 - 11884 - 6257 - 1152 + 14405 + 17329 + 38992	H -35069 -13850 -61989 + 500 +41660 +18401 -21520 +44528 -3590	232	a b c d e f g h i	12 51 47	Oct. 16 -43086 -21245 -19560 - 9092 + 2367 + 4782 + 10124 + 22085 + 47318 + 1540	H + 38895 - 36214 - 13288 - 4536 + 92 + 45884 - 2907 + 8296 - 19424 - 5929
182	a b c d e f g h	13 8 54	Oct. 14 - 51624 - 26774 - 13230 - 11782 - 6148 - 1045 + 14510 + 17427 + 39088	H - 35316 - 14069 - 62237 + 272 + 41418 + 18161 - 21754 + 44301 - 3815	<b>23</b> 5	a b c d e f g h i	13 8 6	Oct. 16 -42356 -20520 -18835 -8361 +3098 +5500 +10836 +22796 +48020 +2251	H + 37635 - 37464 - 14556 - 5792 - 1169 + 44626 - 4171 + 7038 - 20670 - 7187

TABLE I. - MERIDIAN PLATE MEASURES - Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	у
236	a b c d e f g h i	13 11 1	Oct. 16 -42256 -20386 -18692 - 8225 + 3223 + 5634 + 10989 + 22941 + 48179 + 2397	H + 37434 - 37724 - 14789 - 6037 - 1388 + 44405 - 4398 + 6808 - 20896 - 7441	273	a b c d e f g h	12 30 2	Oct. 23 - 51415 - 35950 - 20942 - 18499 - 17990 + 32881 + 56991 + 57200	C + 1042 -41276 + 15082 - 30414 + 13308 + 5186 - 2287 + 42426
258	a b c d e f g h x	12 31 24	Oct. 21 -41816 -24684 -13563 - 3458 + 1821 +27916 +40301 +49864 -50635 +64893	C + 33853 + 11756 - 12480 + 64820 - 41920 - 38388 + 413 - 7753 + 52016 - 91622	286	a b c d e f S h i	12 23 8	Oct. 24 - 54839 - 36396 - 28675 - 21942 + 2728 + 4791 + 8390 + 23064 + 36204 + 44684	H - 29285 + 30794 - 23739 - 53415 + 14393 - 2265 + 34070 + 15395 - 36606 - 3015
259	a b c d e f g h	12 30 0	Oct. 21 -41307 -24207 -13139 - 2918 + 2201 + 28310 + 40742 + 50285 + 65191	H + 33438 + 11296 - 12960 + 64358 - 42415 - 38928 - 130 - 8299 - 92276	287	a b c d e f g h i	12 32 23	Oct. 24 - 54232 - 35802 - 28058 - 21331 + 3342 + 5375 + 8979 + 23687 + 36816 + 45302	C -29815 +30283 -24291 -53950 +13863 -2784 +33572 +14892 -37139 -3519
260	a b c d e f g h	12 42 11	Oct. 21 -41131 -24036 -12948 - 2734 + 2380 + 28474 + 40935 + 50470 + 65420	C + 33195 + 11058 - 13186 + 64083 - 42621 - 39135 - 381 - 8537 - 92470	288	a b c d e f g h i	12 35 23	Oct. 24 - 54029 - 35569 - 27856 - 21154 + 3550 + 5581 + 9202 + 23889 + 37008 + 45504	H - 29983 + 30098 - 24442 - 54122 + 13686 - 2984 + 33354 + 14680 - 37329 - 3738
272	a b c d e f	12 26 48	Oct. 23 - 51594 - 36160 - 21150 - 18704 - 18186 + 32718 + 56829 + 57018	H + 1291 + 41037 + 15244 - 30199 + 13547 + 5356 - 2112 + 42612	311	a b c d e f g h	12 3 8	Oct. 25 - 36980 - 27315 - 26250 - 3443 + 4617 + 13159 + 21721 + 34079 + 52712	C - 12649 + 12608 + 1156 - 19909 + 7066 + 1587 - 36555 + 26982 - 16198

TABLE I. — MERIDIAN PLATE MEASURES — Continued.

PLATE No.	STAR.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	у
312	a b c d e f g h	12 5 43	Oct. 25 - 36800 - 27139 - 26090 - 3267 + 4780 + 13329 + 21882 + 34256 + 52879	H - 12791 + 12426 + 1001 - 20064 + 6900 + 1411 - 36724 + 26803 - 16381	353	a b c d e f g h i x y	11 51 36	Oct. 29 -47756 -38548 -35746 -13437 + 6775 +20149 +19325 +36217 +39465 +17217 +18227	H - 5005 - 25608 + 15700 + 5874 + 24409 + 5527 - 2418 + 3188 - 25217 - 26599 - 24284
314	a b c d e f g h	12 17 58	Oct. 25 - 35966 - 26288 - 25237 - 2417 + 5631 + 14158 + 22718 + 35104 + 53717	C - 13484 + 11786 + 309 - 20756 + 6226 + 748 - 37384 + 26115 - 17037	354	z a b c d e f g h i x y z	11 54 36	- 53663 Oct. 29 - 47519 - 38307 - 35505 - 13195 + 7015 + 20376 + 19544 + 36429 + 39708 + 17405 + 18451	+ 43086  H - 5134 - 25745 + 15584 + 5727 + 24274 + 5380 - 2584 + 3016 - 25387 - 26777 - 24393
329	a b c d e f g h	12 2 11	Oct. 26 - 39476 - 10750 - 8103 - 7816 + 1022 + 19984 + 22681 + 21954 - 3023	C + 5694 + 17538 + 3739 - 39557 + 9989 + 16098 - 14969 - 52279 + 18702	355	a b c d e f g h i x y z	II 57 43	- 66253 Oct. 29 - 47298 - 38074 - 35269 - 12956 + 7253 + 20623 + 19778 + 36688 + 39945 + 17645 + 18685 - 66036	+ 38737 H - 5275 - 25878 + 15458 + 5591 + 24168 + 5275 - 2710 + 2900 - 25496 - 26855 - 24508 + 38649
330	a b c d e f g h	12 5 0	Oct. 26 - 39322 - 10572 - 7895 - 7602 + 1210 + 20184 + 22885 + 22192 - 2836	C + 5512 + 17378 + 3626 - 39687 + 9853 + 15977 - 15118 - 52387 + 18544	360	a b c e f g h x y	11 39 0	Nov. 1 -30676 -34206 - 5760 + 1035 +23414 +25777 +33483 -31772 +25559 +32309	H + 7917 + 21500 - 11678 + 13122 + 9612 + 35465 - 3210 + 222 + 4418 - 24162
331	a b c d e f g h	12 8 I	Oct. 26 - 39103 - 10325 - 7680 - 7408 + 1440 + 20398 + 23100 + 22385 - 2594	H + 5394 + 17236 + 3469 - 39838 + 9709 + 15798 - 15285 + 52535 + 18383	361	a b c d e f g h x y	11 42 23	Nov. 1 - 30419 - 33919 - 5494 - 2569 + 1295 + 23683 + 26027 + 33737 - 31468 + 25789 + 32587	H + 7814 + 21412 - 11775 - 52285 + 12999 + 9491 + 35350 - 3310 + 128 + 4323 - 24270

TABLE I. — MERIDIAN PLATE MEASURES — Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	Star.	P. S. T.	x	у
362	a b c d e f g h x y z	II 45 8	Nov. 1 - 30178 - 33719 - 5262 - 2300 + 1523 + 23901 + 26236 + 33986 - 31245 + 26079 + 32848	H + 7715 + 21296 - 11874 - 52379 + 12919 + 9408 + 35286 - 3384 + 23 + 4228 - 24331	411	a b c d o f g h	II 23 6	Nov. 3 -36822 -33061 -27119 -15958 +17763 +35655 +36652 +40064 +22670	H - 31501 + 9804 - 7218 + 12285 + 8463 + 888 - 15910 - 37586 - 15256
384	a b c d e f g h	II 25 47	Nov. 2 24485 16413 13875 12786 8134 +- 11958 +- 27094 +- 31010 +- 38897	H + 11418 + 8978 + 33076 + 1656 + 8062 - 19646 - 26439 - 14090 - 13462	414	a b c d e f g h	11 36 15	Nov. 3 - 35678 - 31964 - 26006 - 14861 + 18831 + 36734 + 37729 + 41195 + 23769	C -31832 + 9485 - 7524 +11987 + 8179 + 612 -16192 -37852 -15526
385	a b c d e f g h	11 29 11	Nov. 2 - 24199 - 16144 - 13596 - 12504 - 7853 + 12231 + 27348 + 31284 + 39142	C + 11323 + 8911 + 32996 + 1572 + 7993 - 19702 - 26518 - 14161 - 13572	439	a b c d e f g h i	II 4 O	Nov. 4 -31522 -18513 -16294 -11125 + 4553 + 8909 + 9285 + 45833 + 47764	H - 4859 + 18820 - 44266 - 49507 - 16277 - 7046 + 4144 - 6492 - 2920
386	a b c d e f g h	II 36 54	Nov. 2 - 23571 - 15486 - 12957 - 11892 - 7228 + 12851 + 27963 + 31904 + 39745	H + 11096 + 8662 + 32758 + 1368 + 7766 - 19932 - 26709 - 14383 - 13767	441	a b c d e f g h	11 11 1	Nov. 4 - 30936 - 17919 - 15710 - 10542 + 5159 + 9501 + 9912 + 46474 + 48374	C - 4978 + 18695 - 44374 - 49636 - 16403 - 7192 + 4013 - 6636 - 3073
408	a b c d o f g h	11 10 0	Nov. 3 - 37930 - 34179 - 28224 - 17047 + 16680 + 34591 + 35565 + 38977 + 21562	C - 31224 + 10111 - 6928 + 12604 + 8785 + 1204 - 15620 - 37297 - 14959	443	a b c d e f g h	11 24 23	Nov. 4 - 29807 - 16753 - 14577 - 9416 + 6265 + 10677 + 11039 + 47576 + 49483	H - 5263 + 18405 - 44650 - 49899 - 16669 - 7446 + 3740 - 6930 - 3358

TABLE I. - MERIDIAN PLATE MEASURES - Continued.

PLATE No.	Star.	P. S. T.	x	у	Plate No.	STAR.	P. S. T.	x	у
445 <sup>*</sup>	a b c d e f g h i x y z	10 59 0	Nov. 5 - 79298 - 75588 - 39471 - 22132 + 3169 + 3623 + 31752 + 38342 + 13113 - 24002 - 11118 - 9613	C -33103 -23766 -13769 + 424 -26845 -14514 +32310 -22540 -22694 -11988 -6670 +4042	466	a b c d e f g h i j	10 48 48	Nov. 9 - 49091 - 22244 - 15650 - 8988 + 1444 + 5390 + 9722 + 15380 + 15391 + 36967	C - 5080 + 10062 - 16696 + 24193 - 60878 + 17120 - 28383 + 37007 + 39278 - 20088
447	a b c d e f g h i x y z	11 5 0	Nov. 5 - 78824 - 75111 - 38977 - 21633 + 3689 + 4134 + 32262 + 38871 + 13637 - 23499 - 10670 - 9103	H - 33217 - 23882 - 13827 + 332 - 26938 - 14596 + 32221 - 22621 - 22767 - 12070 - 6730 + 3940	467	a b c d e f g h i j	II 2 54	Nov. 9 - 47893 - 21045 - 14440 - 7791 + 2662 + 6566 + 10915 + 16577 + 16570 + 38158	H - 5050 + 10096 - 16647 + 24217 - 60790 + 17203 - 28298 + 37094 + 39375 - 20014
450	a b c d e f g h i x y z	11 23 54	Nov. 5 77213 73482 37372 20022 +- 5275 +- 5699 +- 33838 +- 40451 +- 15226 21896 9073 7502	C -33568 -24181 -14187 + 52 -27256 -14892 +31966 -22932 -23096 -12406 -7018 + 3680	486	a b c d e f g h t w x y z	10 30 0	Nov. 10 - 44917 - 44459 - 37158 - 17357 - 13929 + 24384 + 25596 + 32110 + 21084 + 44854 - 15929 - 14656 - 11574	C + 12650 - 7963 - 32769 - 10578 + 22767 + 55084 + 33870 + 15809 - 2278 + 16026 + 2063 + 1366 + 1415
464	a b c d e f g h i j	IO 4O 54	Nov. 9 -49716 -22872 -16304 - 9616 + 775 + 4748 + 9066 + 14783 + 14761 + 36320	H - 5097 + 10068 - 16693 + 24202 - 60851 + 17145 - 28369 + 37022 + 39299 - 20096	487	a b c d e f g h t w x y z	10 37 0	Nov. 10 - 44336 - 43876 - 36585 - 16753 - 13342 + 24952 + 26177 + 32690 + 21651 + 45407 - 15354 - 14055 - 10952	H + 12634 - 7910 - 32731 - 10522 + 22801 + 55041 + 33903 + 15829 - 2240 + 16003 + 2101 + 1408 + 1432

<sup>\*</sup> The time for this plate has been changed from the records as published in Lick Observatory Balletin No. 13 by + 1m.

TABLE I. — MERIDIAN PLATE MEASURES — Continued.

PLATE	Star.	P. S. T.	x	y	PLATE	STAR.	P. S. T.	x	y
No.			Nov. 10		No.			Nov. 13	H
492		11 0 0	<b>-42388</b>	+ 12757	539	a	10 12 0	- 27527	- 14048
45-	b		-41984	- 7802	307	b		- 25206	- 659 <b>1</b>
	c		- 34703	- 32636	İ	C		- 11578	+ 4534
	d e		- 14814	<b>—</b> 10407		d e		- 2280 + 1873	- 1164 + 19506
	f		- 11405 + 26882	+ 22930 + 55169		f		+ 5176	- 36914
	g		+ 28106	+ 34052		g		+ 12662	+ 12865
	h	i	+ 34042	+ 15981		h		+31514	+ 10706
	W		+ 47353	+ 16125 + 2229		i		+ 45831 + 44202	+ 14451 + 8662
	y		-13395 -11097	+ 1568		v	1	- 51798	- 1366g
	z	l	- 9037	+ 1574		w		+ 33339	- 18479
1			Nov. 12	н				Nov. 13	С
518	a	10 16 1	<b>- 26961</b>	+ 718	540		10 15 0	- 27290	-13986
1	b	1	- 11178 - 7636	- 15965 + 18224		b	1	- 24972 - 11360	- 6517
	ď	l	- 1493	+ 4903		ď		- 204I	+ 4597 - 1078
			+ 18955	+ 51307		•		+ 2104	+ 19579
ł	f		+ 34230	-13121		f		+ 5429	- 36839
ł	g h		+ 48876 + 48176	- 7712 - 14698		g		+ 12887 + 31732	+ 12938 + 10780
1	X		-20113	- 15576		i		+ 46064	+ 14529
	z	1	+ 39085	+ 12622		u	l	+ 44450	+ 8743
						▼		-51548	- 13611
	}	!				w		+ 33606	- 18431
519	a	10 19 23	Nov. 12 - 26678	C + 662	571*	a	9 11 36	Nov. 23 -35081	H + 29216
319	i	10 19 13	- 10888	-15951	3/1	ь	9 11 30	- 35602	- 26313
	C		- 7352	+ 18244		c		- 21468	+ 14752
	d		<b>— 1222</b>	+ 4946		d		+ 2394	+ 17842
	f		+ 19230 + 34530	+ 51366		e f		+ 4890 + 17559	- 4829 + 27591
Ī	g		+49131	- 7698		g	1	+ 26192	+ 23104
	h		+48441	-14683		h	İ	+ 52231	-33093
i	z		- 19857	-15598					
	_		+ 39346 Nov. 12	+ 12625 H				Nov. 23	С
520	a	10 22 6	- 26447	+ 797	573*	a	9 17 47	- 34732	+ 29582
, , ,	b		- 10661	-15854	3/3	b	, -, -,	- 35260	-25962
	C		- 7129	+ 18350		C		-21128	+ 15104
	d e	l	- 988 + 19471	+ 5002 + 51400		d		+ 2761 + 5280	+ 18212 4542
	f	1	+ 34778	- I3023	1	f	ł	+ 17926	+ 27991
ŧ	g		+ 49393	- 7615		g		+ 26614	+ 23472
I	h	1	+ 48802	-14612		h		+ 52599	- 32752
I	z		- 19625 + 39602	- 15498 + 12703					
I	_		Nov. 13	C				Nov. 23	н
538		10 9 23	- 27744	- 14105	576*		9 37 54	-33565	+ 30799
	b		+ 25449	- 663I		b		-34102	-24756
	c d		- 11797 - 2501	+ 4488 - 1211		c d		- 19940 + 3918	+ 16327 + 19420
	u		- 2501 + 1652	+ 19469				+ 6420	+ 19426 - 3248
1	f		+ 4974	<b>– 36960</b>		f		+ 19088	+ 29152
	g h		+ 12452	+ 12804		g h		+ 27737	+ 24661
	h i		+ 31307 + 45644	+ 10657 + 14499		n		+ 53765	-31533
	t		- 73553	- 18542					
	u		+ 44002	+ 8623					
	V W		-52026 - 52765	- 13715 - 18533					
		]	+ 33165	10533		L			

<sup>\*</sup> These times have been changed from the records as published in Lick Observatory Bulletin No. 13 by  $-5^{\rm m}$ .

TABLE I. — MERIDIAN PLATE MEASURES — Continued.

							,		
PLATE No.	Star.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	x	у
588	a	9 36 51	Nov. 24 - 56529	C - 10498	660	a	8 50 54	Nov. 29 - 74395	H + 8149
	b		- 56494	+ 7730		b		-49432	- 22982
I	C		+ 5871	+49910		C		-48190	- 27761
l	d		+ 16916	- 50614		d		+ 16818	+ 28070
l l			+ 21015	-50642		8		+ 22908	+ 15538
	f		+ 32222	+ 64096		f		+ 25598	<b>-48426</b>
	g h		+ 39750	+ 40580		g h		+ 35333	- 9318 - 604
	•		+ 40772	+ 25659		-		+ 40695	- 694
			Nov. 27	H		_		Nov. 29	C
602		9 0 53	-53034	+ 7736	661	a b	8 53 54	<b>-74248</b>	+ 8454
ı	b		- 15973 - 9759	- 14442 + 41238		C		-49353 -48108	- 22680 - 27463
	ď		+ 2382	-36472		ď		+ 16953	+ 28288
l I	f		+ 24277	+ 9920		ě		+ 23028	+ 15737
			+ 50302	- 2342		f		+ 25647	<b>-48189</b>
	g h		- 50523	<b>-21660</b>		g		+ 35412	<b>-</b> 9102
						h		+ 40774	- 509
			Nov. 27	H				Nov. 29	н
606	8	9 13 1	- 52508	+ 8593	666	8	998	<b>-</b> 73764	+ 9531
	b		- 15478	-13516		b		-48813	- 21599 - 26262
	c d		+ 9268	+ 42089		C d		-47572	- 26360 + 20402
	f		+ 2908 + 24738	-35542 +10797				+ 17437	+ 29492 + 16950
			+ 50721	- 1425		f		+ 23527 + 26220	- 46988
	g		<b>-49990</b>	- 20725		g		+ 35941	<b>-</b> 7882
	_		4,,,,	10,13		h		+41319	+ 733
			Nov. 28	С				Dec. 2	н
627	2	8 55 43	- 60420	+ 11550	679	8	8 38 23	<b>-48778</b>	+ 31482
	Ъ		<b>-45361</b>	+ 26292		b		- 24974	<b>-34688</b>
	C		-11185	- 16737		C		- 23198	-5454I
	d		+ 9474	+ 27985		d		+ 3091	+ 13157
	f		+ 16842	-43665 -48810		f		+ 7065 + 12638	+ 36710 19634
			+ 29099 + 38118	- 24560		g		+ 26494	- 21185
	g h		+ 52912	+ 11920		ĥ		+ 37531	+ 36442
	_		1 3-9	1 32933		x		+ 1716	+ 55887
			Nov. 28	н		٠.		Dec. 2	С
629		9 I 53	<b>-60157</b>	+ 12016	680		8 41 0	-48718	+ 31652
	b		-45103	+ 26771		Ъ		- 24900	<b>- 34482</b>
	C		- 10950	<b>- 16278</b>	1	C		- 23109	<sup>-</sup> 54354
	d		+ 9724	+ 28449		d	[	+ 3113	+ 13334
1	f		+ 17059	-43207 -4822T		e f		+ 7120	+ 36954
1			+ 29292 + 38331	-48331 -24085		_	]	+ 12796 + 26572	- 19392 - 20954
I	g		+ 53130	+ 12375	1	g h		+ 37560	+ 36677
	-		1 33-30	1 223/3		I		+ 1772	+ 56143
			Nov. 28	С				Dec. 2	н
630 <sup>°</sup>		9 4 54	- 60025	+ 12236	681		8 44 I	- 48640	+ 31953
I	Ъ		-44998	+ 26984		b		- 24856	-34207
I	C		- 10831	- 16048		Ç		- 23091	- 54072
1	d		+ 9858	+ 28673		d		+ 3208	+ 13599
			+ 17177	-42974		0		+ 7204	+ 37186
	f		+ 29406	-48110 -00860		f		+ 12741	- 19165 - 20711
1	g h		+ 38464	- 23860 + 12610		g h		+ 266 <b>0</b> 7 + 37663	- 20711 + 36901
I	"		+ 53258	7 12010		X		+ 37003	+ 56387
I						_		1 20,0	1 3337
	L			·					

TABLE I. - MERIDIAN PLATE MEASURES - Continued.

<u> </u>		<del></del>							
PLATE No.	STAR.	P. S. T.	x	у	PLATE No.	Star.	P. S. T.	x	у
698	a b c d e f	8 36 0	Dec. 3 -64636 -30304 -10844 -12161 +27892 +76046	C + 8642 - 23967 + 69852 - 7697 - 66492 - 8839	756*	a b c d e f g	8 15 0	Dec. 6 -41213 -39492 -10373 - 5594 +25689 +32241 +36287 +43996	C - 34605 - 11782 - 26491 - 7525 - 50948 + 30422 - 49963 - 27465
699	a b c d e f	8 39 0	Dec. 3 - 64622 - 30299 - 10857 - 12135 + 27904 + 76059	C + 8844 - 23750 + 70091 - 7430 - 66260 - 8588	758*	a b c d e f g h	8 21 11	Dec. 6 -41190 -39475 -10348 - 5580: +25713 +32255 +36307 +44008	H - 33990 - 11179 - 25907 - 6938 - 50380 + 30898 - 49398 - 26884
7∞	a b c d e f	8 42 0	Dec. 3 - 64573 - 30201 - 10825 - 12064 + 27995 + 76114	H + 9112 - 23472 + 70344 - 7182 - 65955 - 8311	759 <b>*</b>	a b c d e f	8 24 0	Dec. 6 -41178 -39450 -10338 -5582 +25714 +32276 +36304 +43994	C - 33708 - 10894 - 25622 - 6692 - 50098 + 31174 - 49140 - 26627
725	a b c d e f g	8 18 0	Dec. 5 - 34863 - 13723 - 1230 + 4623 + 14471 + 22878 + 37448 + 64176	H -33578 -52750 + 8046 -14161 +20243 +51422 -32754 +14532	787	a b c d e f g	8 11 0	Dec. 7 - 20412 - 16192 - 11993 - 2058 - 3022 + 11053 + 21301 + 60245	H - 49173 - 19805 - 33871 - 15649 - 19789 + 20844 - 5421 - 13227
726	a b c d e f g	8 21 11	Dec. 5 - 34843 - 13736 - 1206 + 4646 + 14520 + 22928 + 37472 + 64215	C - 33265 - 52442 + 8363 - 13876 + 20546 + 51718 - 32491 + 14771	790	a b c d e f g	8 20 0	Dec. 7 - 20455 - 16215 - 12008 - 2080 - 3045 + 11027 + 21269 + 60201	C -48421 -18987 -33076 -14796 -18952 +21692 -4596 -12387
728	a b c d e f g h	8 27 0	Dec. 5 - 34813 - 13649 - 1170 + 4703 + 14553 + 22956 + 37530 + 64227	H - 32750 - 51938 + 8874 - 13351 + 21067 + 52287 - 31955 + 15348	791	a b c d e f g h	8 23 0	Dec. 7 - 20482 - 16226 - 12041 - 2094 - 3063 + 11035 + 21269 + 60171	H -48031 -18675 -32738 -14504 -18667 +21954 -4308 -12120

<sup>\*</sup> These times have been changed from the records as published in Lick Observatory Bulletin No. 13 by +1m.

TABLE I. - MERIDIAN PLATE MEASURES - Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	y
821	a b c d e f g h	8 20 55	Dec. 8 - 50600 - 20863 - 9673 - 3299 + 10881 + 29451 + 34182 + 60515	C + 26237 - 40874 + 15378 + 35177 - 14589 - 10403 - 4213 + 28174	847	a b c d e f g h	8 4 47	Dec. 11 - 40849 - 39407 - 9182 + 13391 + 161208 + 45452 + 59731 + 10764	H + 26620 - 6529 + 30838 - 48054 - 4246 - 11978 + 31830 + 36588 + 50132
823	a b c d e f g	8 27 0	Dec. 8 - 50632 - 20903 - 9715 - 3335 + 10835 + 29387 + 34119 + 60453	C + 26817 - 40230 + 15968 + 35785 - 13978 - 9796 - 3603 + 28789	848	a b c d e f g h	8 8 o	Dec. 11 - 40927 - 39475 - 9256 + 13312 + 16125 + 16125 + 45377 + 59666 + 10685	C + 26937 - 6218 + 31169 - 47740 - 3927 - 11669 + 32152 + 36914 + 50418
824	a b c d e f g	8 30 0	Dec. 8 - 50668 - 20940 - 9743 - 3380 + 10828 + 29382 + 34110 + 60486	H + 27123 - 39990 + 16265 + 36083 - 13724 - 9528 - 3340 + 29049	849	a b c d e f g h x	8 10 43	Dec. 11 -40971 -39526 - 9315 + 13257 + 16058 + 16063 + 45323 + 59607 + 10651	H + 27224 - 5946 + 31430 - 47454 - 3660 - 11389 + 32426 + 37180 + 50721
827	a b c d e f g	8 7 55	Dec. 10 -53273 -14363 -3596 -3198 -1560 -1015 +9944 +22359	C + 16094 - 58638 + 18964 + 39106 + 65899 - 41402 - 15180 + 14317	854	a b c d e f g h	8 5 36	Dec. 12 -45199 -16645 - 7926 + 402 + 1015 + 26085 + 39446 + 45351	C + 55859 - 6761 + 23638 + 38776 + 21458 - 32349 - 49158 - 32381
832	a b c d e f g	8 22 53	Dec. 10 -53535 -14684 - 3840 - 3410 - 1769 - 1330 + 9663 + 22114	H + 17580 - 57202 + 20443 + 40572 + 67336 - 39960 - 13766 + 15786	855	a b c d e f g h	8 8 36	Dec. 12 -45293 -16711 - 8028 + 295 + 928 + 26020 + 39377 + 45291	H + 56146 - 6466 + 23944 + 39083 + 21752 - 32053 - 48833 - 32050
833	a b c d e f g	8 25 54	Dec. 10 - 53556 - 14699 - 3886 - 3475 - 1817 - 1342 + 9628 + 22048	C + 17869 - 56838 + 20735 + 40874 + 67654 - 39594 - 13421 + 16102	8 <u>5</u> 6	a b c d e f g h	8 II 54	Dec. 12 -45360 -16802 - 8088 + 227 + 857 + 25928 + 39289 + 45210	C + 56526 - 6091 + 24295 + 39432 + 22114 - 31706 - 48499 - 31612

TABLE I. - MERIDIAN PLATE MEASURES - Continued.

PLATE No.	STAR.	P. S. T.	x	y	Plate No.	Star.	<b>∴P. S. T.</b>	x	y
878	a b c d e f g h	7 40 36	Dec. 22 - 20283 - 4698 + 598 + 7356 + 18190 + 25730 + 25794 + 26458	H + 58426 + 8852 + 18586 - 32581 - 91054 - 36343 - 15375 + 31231	903	a b c e f g h i	7 35 0	Dec. 24 -48833 -29483 -39888 +4874 +12225 +14381 +15564 +43450 -7351	H + 14515 - 59953 - 15126 - 40352 - 48239 - 53460 + 24946 - 4753 - 15376
880	a b c d e f g	7 46 36 -	Dec. 22 - 20731 - 5129 + 159 + 6912 + 17730 + 25298 + 25354 + 26013	C + 59053 + 9493 + 19219 - 31914 - 90383 - 35693 - 14731 + 31889	904	a b c e f g h i	7 38 I	Dec. 24 - 49055 - 29742 - 31122 + 4619 + 11950 + 14106 + 15351 + 43175 - 7606	C + 14869 - 59622 - 14777 - 40021 - 47898 - 53126 + 25261 - 4441 - 15034
881	a b c d e t g h	7 49 58	Dec. 22 -21036 - 5398 - 124 + 6690 + 17566 + 25058 + 25089 + 25739	H + 59435 + 9858 + 19599 - 31536 - 90006 - 35267 - 14340 + 32270	906	a b c e f gh i j	7 44 0	Dec. 24 - 49572 - 30259 - 31620 + 4134 + 11458 + 13628 + 14782 + 42664 - 8096	H + 15497 - 58985 - 14129 - 39371 - 47241 - 52474 + 25975 - 3770 - 14383
889	a b c d	7 35 36	Dec. 23 -44249 + 3737 + 753 + 15743 + 29938 + 26388 + 28067	C - 18882 + 59920 - 31279 - 34117 - 38311 - 10475 + 23163	920	a b c d e f	7 36 0	Dec. 26 - 61902 + 21924 + 32370 + 16431 + 60973 + 68675 + 66062	C -12526 +27536 +35082 -51250 +15085 -11378 -51335
890	a b c d e f	7 38 47	Dec. 23 - 44492 + 3500 + 486 + 15467 + 29659 + 26124 + 27795	H - 18502 + 60258 - 30934 - 33788 - 37975 - 10133 + 23494	921	a b c d e f	7 39 0	Dec. 26 - 62162 + 21637 + 32114 + 16128 + 60705 + 68395 + 65780	H - 12169 + 27833 + 35358 - 50927 + 15410 - 11090 - 51048
891	a b c d e f g	7 4I 36	Dec. 23 - 44701 + 3288 + 282 + 15259 + 29463 + 25921 + 27611	C - 18209 + 60545 - 30628 - 33488 - 37643 - 9838 + 23791	922	a b c d e f	7 41 36	Dec. 26 - 62389 + 21395 + 31870 + 15916 + 60470 + 68155 + 65545	C -11894 +28130 +35687 -50603 +15713 -10775 -50716

PLATE I. - MERIDIAN PLATE MEASURES - Continued.

PLATE No.	STAR.	P. S. T.	x	у	PLATE No.	Star.	P. S. T.	x	y
930	a b c d e f g	7 26 11	Dec. 28 - 69930 - 47821 - 21771 - 18622 - 10942 + 314 + 8987 + 26858	H - 4560 - 8858 - 43130 - 2214 - 26940 + 57093 - 79403 + 48944	932	a b c d e f g	7 31 47	Dec. 28 - 70519 - 48402 - 22350 - 19195 - 11504 - 266 + 8400 + 26250	H - 3966 - 8251 - 42500 - 1600 - 26336 + 57675 - 78752 + 49524
931	a b c d e f g h	7 28 52	Dec. 28 - 70209 - 48082 - 22049 - 18898 - 11192 + 42 + 8749 + 26549	C - 4293 - 8577 - 42784 - 1930 - 26673 + 57375 - 79083 + 49235					

TABLE II. - MERIDIAN PLATE CONSTANTS.

	PLATE	I	PLATE CONSTANTS			Standard	Constants.	Reys	ACTION C	ONSI	ANTS.
DATE.	No.		Þ		7	p	7	M <sub>s</sub>	Му, 1	V <sub>æ</sub>	Ny
Oct. 5	84 85	+.0	00023 53	c	000082 490		-	+.000251 252	+.0000	003 I	+.000257
	90	+	39	+	525	000462	+.000650		-	3	"
Oct. 6	98	_	208	-	62			248	+	2	254
	100 102	+	86 256	+	195 262	+.000027	+.000402	247	+	I	"
Oct. 7	110	_	272	_	284			0.47		0	054
OCL. 7	112	_	388	_	272			247	_	1	<sup>254</sup>
	113	_	77	-	298			"	-	I	**
Oct. 8	117	-	825	+	2036			243		0	251
	118 119	_	816 871	+	1802 2288			"	_	2	44
				1						•	
Oct. 9	122 123	+	133	+	58 281			244	+	I	252
·	125	_	13	+	220			"	<b>'</b>	0	"
						000313	004054				
Oct. 10	129	-	836	+	951			244		0	253
	130 131	_	917 736	+	681 1107			"		0 0	"
Oct. 12	142	+		+	400						276
Oct. 12	143	_	33 <b>4</b> 440	<u>-</u>	477 388			247 248	=	4	256 "
	I44	+	124	-	87	000230	001990	"	-	5	"
						000230	001990				
Oct. 13	156 157	+	250 203	+	421 203			245	<del>+</del>   +	I	256
	160	_	47	-	224			"	-	2	
						002018	002934				
Oct. 14	180	+	93	-	30			246	+	2	257 "
	181 182	_	67 17	=	99 92		Ì	"	+	1	"
			•		•	000962	000033				
Oct. 15	204	_	121	_	570			247	+	2	258
	205 207	+	76	++	348			l .	+	2	"
	207	_	209	_	219	000334	000527	246		٥	
Oct. 16	232	+	23	_	77			244	+	2	256
	235	+	230	-	42			244 "	ļ .	0	256 "
	236	_	264	+	120	000391	+.00236		-	I	•
				١.							
Oct. 21	258 259	_	73 111	+	993 421			245	<del>+</del>   +	I	261 "
	260	+	174	-	495		1	"	•	0	"
						000193	+.000258				
Oct. 23	272	_	573	+	127			252		0	270
	273		343	+	619			+.000252		٥	+.000270

TABLE II. - MERIDIAN PLATE CONSTANTS - Continued.

	PLATE	P	LATE C	ONSTAR	its.	Standard	Constants.	REFR	ACTION COM	STANTS.
DATE.	No.		p		r	Þ	r	M <sub>s</sub>	My, Ns	N,
Oct. 24	286 287	+.0	00083	+.0	233			+.000251	.00000	2 "
	288	+	72	-	262	000914	00280	"	- 8	"
Oct. 25	311 312	- +	97 15	+	152			247 "	+ :	265
	314	+	76	-	39	000714	+.00197		'	· "
Oct. 26	329 330	+ - +	35 80 35	+	282 454 160			248 "	+ :	267
	331	_	35	_	100	000417	002383		· `	<b>'</b>
Oct. 29	353 354 355	+ +	29 92 119	+ - +	177 184 17			254 "	(	276
	333		119	•	-,	000314	+.000864			
Nov. 1	360 361 362	-	673 64 125	+ + +	2609 2486 3095			250 "		272
Nov. 2	384 385 386	  -  -	331 51	+	9 14			246 "		267
	300	<b>T</b>	397	+	9	000551	002187			
Nov. 3	408 411 414	- + +	426 69 362	- - +	207 261 468			245 4	+ 4	
						000207	+.002069			
Nov. 4	439 441 443	+ - +	79 227 139	+ - -	341 86 262	000847	00191	247 " "		269
Nov. 5	445 447	+ +	163 19	-	137 181			246	+ :	268
	450	-	197	+	315	000238	+.000238		-   ;	3
Nov. 9	464 466 467	- - +	92 10 106	- - +	297 97 382			246 247 248		268 269 270
						000734	+.000252			
Nov. 10	486 487 492	+	119 288 156	+	69 61 4			245 "	+ :	"
Nov. 12	518	+	218	_	720	000933	004042	246	+ 4	267
1107. 13	519 520	+	108 325	++	170 117 52	000656	<b>00400</b> 1	+.000245	+ :	

TABLE II. — MERIDIAN PLATE CONSTANTS — Continued.

D	PLATE	P	LATE C	ONSTAN	TS.	Standard	Constants.	Repa	ACTION	Coers	ants.
DATE.	No.		Þ		7	p	7	M:	M <sub>y</sub> ,	Ns	N,
Nov. 13	538 539	o +	00378	+.0	260			+.000245	+.00 +	0004	+.000267
	540	÷	210	-	9	000810	+.000217	"	+	3	"
Nov. 23	571	_	163	_	1044		• *******	251	+	3	269
	573 576	<u>-</u>	77 20	-	209 255			"	+	3	"
Nov. 24	588	-	228	+	1724			251	-	3	268
Nov. 27	601	-	193	-	246			249	+	3	265
	602 606	+	417 607	+	102 146	001110	+.000717	"	++	2 I	44
Nov. 28	627	_	219	+	169	001110	T.000/1/	248	+	2	263
	629 630	++	122	-	110 60			"		0	66
Nov. 29	660	_	143	+	239	+.000062	00114	248	+	2	262
1107. 29	661 666	+	207 68	+	808 578			248 "	+	I 2	66
Dec. 2	679	-	28	_	161	+.000506	004946	245	+	2	2.5
<i>Du.</i> .	680 681	-+	44 61	+	569 404			"	++	I	257 "
Dec. 3	4-0		-0			000126	+.003284				0
Dec. 3	698 699 700	- +	38 65 93	- +	259 25 283	000661	+ .00324	246	+	I I 0	258 "
Dec. 5	725	+	179	+	244	00001	T .00324	246	+	3	255
	726 728	+	75 245	+	371 137	000892	001763	245	+	2 1	"
Dec. 6	756 758	- +	319 87	+	363 72			246	++	3 2	255 "
	759	+	213	-	299	000663	+.000201	245	+	1	254
Dec. 7	787 790	+ -	27 356	++	53 409 482			248 247	++++	3 2	256 "
	791	+	311	-	402	000538	+.000647	246	+	1	
Dec. 8	821 823	<del>-</del> +	42 350	++	31			247 248	+	0	256
	824	_	316	-	126	00147	+.00171	+.000248	_	1	+.000256

TABLE II. - MERIDIAN PLATE CONSTANTS - Continued.

	PLATE	I	PLATE C	ONSTAL	NTS.	STANDARD	Constants.	Rese	ACTION	Coers	iants.
DATE.	No.		þ		•	þ	r	M.	M <sub>y</sub> ,	N <sub>s</sub>	N,
Dec. 10	827	<b>–.</b> o	00074	+.0	000434			+.000251	+.00	0001	+.000258
	832	_	215	-	378			252		I	
	833	+	276	-	67	İ	}	253	<b> </b>	1	"
						000342	000511				
Dec. 11	847	+	21	+	4			250	+	I	257
	848	-	67	+	20			" "	+	I	"
	849	+	51	_	32			i	+	I	<b>*</b> *
						000655	+.000336				
Dec. 12	854	_	48	-	240			251	+	I	257
	855	-	38	+	168			".	+	I	"
	856	+	85	+	61	001055	+.001118			0	
Dec. 22	878	_	128	_	289			253 "		0	255
	88o	+	98	_	281				_	I	255 "
	881	+	31	+	569			"	-	I	"
						000457	+.000452				
Dec. 23	889	_	167	+	235			251	+	I	252
	890	+	33	-	151			250	İ	0	4
	891	+	134	-	70			<b>"</b>		0	"
						000095	+.000250				
Dec. 24	903	_	78	+	133			250		0	252
	904	+	145	-	342			, ü	l	0	ii ii
	906	_	79	+	221			l "		0	"
						000397	001946				
Dec. 28	930	-	648	+	4347			253		•	<sup>2</sup> 53
	931	_	526	+	4743			"	l	0	
	932	-	265	+	4423			+.000253		0	+.000253

Table III. — Meridian Mean Places, Reduction to Apparent Place, and Parallax Corrections.

DATE.	PLATE	Berlin M. T.	Mean Pl	ACE 1900. 0.	REDUCT Apparen	ION TO T PLACE.	PARAL	LAX Δ.
DAIL.	No.	DESIAN M. 1.	a	8	α	8	a	8
		h m s	h m s	• ' "		<del>"</del>		"
Oct. 5	84	22 28 22	2 43 48.267	46 35 4.07	+6.057	+13.02	095	-2.64
	85	38 22	48.131	13.08			040	2.66
	90	23 8 35	47-771	40.49			+.126	2.62
Oct. 6	98	22 27 50	2 43 37.268	46 56 43.03	6.107	13.19	077	2.78
	100	36 36	37.144	50.88			028	2.80
	102	23 50 41	36.936	57 4.01			+.051	2.79
Oct. 7	110	22 31 22	2 43 22.375	47 18 13.96	6.158	13.39	034	2.93
	112	43 46	22.145	24.99			+.037	2.93
	113	46 59	22.107	27.93			+.055	2.93
Oct. 8	117	22 29 35	2 43 3.621	47 39 27.25	6.208	13.57	02I	3.07
	118	34 29	3.520	31.51			+.008	3.07
	119	43 35	3.312	39.34			+.061	3.06
Oct. 9	122	22 20 35	2 42 40.948	48 0 19.45	6.257	13.78	049	3.20
	123	23 46	40.870	22.00	6.258		030	3.21
	125	34 22	40.619	31.28	6.258		+.033	3.21
Oct. 10	129	22 23 18	2 42 13.899	48 21 6.44	6.308	14.00	007	3.35
	130	26 35	13.814	9.13			+.013	3.35
	131	29 43	13.720	11.91			+.032	3.35
Oct. 12	142	22 38 58	2 41 6.734	49 1 55.90	6.406	14.49	+.147	3.58
	143	41 40	6.643	58.02			+.164	3.57
	144	44 58	6.538	2 0.68			+.184	3⋅55
Oct. 13	156	22 1 18	2 40 28.113	49 21 13.64	6.453	14.75	061	3.76
	157	4 50	27.993	16.74			038	3.77
	160	18 46	27.486	27.89			+.050	3-77
Oct. 14	180	21 55 22	2 39 44.080	49 40 36.77	6.500	15.02	070	3.90
	181	59 35	43.924	40.32			043	3.91
	182	22 2 29	43.814	42.65			024	3.91
Oct. 15	204	21 49 46	2 38 55.546	49 59 36.79	6.546	15.31	077	4.04
	205	52 35	55.429	38.99			059	4.05
	207	22 4 35	54-915	48.43			+.021	4.06
Oct. 16	232	21 45 22	2 38 2.464	50 18 12.27	6.592	15.64	076	4.19
	235	22 1 41	1.733	24.66			+.034	4.20
	236	4 30	1.593	26.95			+.053	4.20
Oct. 21	258	21 24 59	2 32 28.960	51 43 51.59	6.799	17.38	047	4.90
	259	32 35	28.491	56.35			+.008	4.91
	260	35 46	28.297	58.65			+.032	4.91
Oct. 23	272	21 20 23	2 29 44.270	52 14 7.68	6.869	18.19	004	5.19
,	273	23 37	44.069	9.69			+.021	5.18
Oct. 24	286	21 16 43	2 28 15.653	52 28 16.26	6.901	18.62	+.010	5.32
	287	25 58	15.003	21.31			+.081	5.31
	288	28 58	14.782	23.22			+.104	5.30
Oct. 25	311	20 56 43	2 26 44.201	52 41 33.10	+6.931	+19.06	104	5-43
-	312	59 18	44.020	34.78			084	5-44
	314	21 11 33	43.112	41.37	1		+.012	-5-45

TABLE III. — MERIDIAN MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

DATE.	PLATE	BERLIN M. T.	Mean Pla	CE 1900. O.	Reduct Apparen		PARALI	LAX Δ.
DATE.	No.	DEKLIN M. I.	a	8	α	8	a	8
		h m s	h m s	• , ,,		"	8	"
Oct. 26	329	20 55 46	2 25 7.501	52 54 17.19	+6.957	+19.60	069	-5.57
	330	58 35	7.290	18.49			047 022	5.58 5.58
	331	21 1 41	7.053	19.96			022	3.30
Oct. 29	353	20 45 11	2 19 56.482	53 27 43.45	7.021	20.92	019	5.95
	354	48 11 51 18	56.230 55.965	44.89 46.10		20.92 20.93	+.005 +.031	5.95 5.95
	355	3. 10	33.903	40.10		20.93	3.	
Nov. 1	360	20 32 35	2 14 18.466	53 53 33-44	7.058	22.41	+.021	6.28
	361 362	35 58 38 43	18.184 17.924	34.42 35.33			+.051	6.27 6.27
	302	30 43	17.924	33.33			1,4	·
Nov. 2	384	20 19 22	2 12 21.899	54 0 19.98	7.064	22.92	042	6.37
	385	22 46	21.594 20.895	20.72 22.91			013 +.055	6.38 6.37
	386	30 29	20.895	22.91			1.033	0.37
Nov. 3	408	20 3 35	2 10 23.699	54 6 10.57	7.065	23.44	130	6.44
	411	16 41	22.480	13.58			+.101	6.47 6.46
	414	29 50	21.258	16.53			7.101	0.40
Nov. 4	439	19 57 35	2 8 23.140	54 11 6.94	7.064	23.96	132	6.53
	44I	20 4 36	22.459	8.23		23.96	069	6.55 6.56
	443	17 58	21.194	10.89		23.97	+.050	0.50
Nov. 5	445	19 52 35	2 6 21.240	54 15 5.45	7.059	24.48	124	6.61
}	447	58 35	20.666	6.26			071 +.100	6.63 6.63
l	450	20 17 29	18.890	9.28			7.100	0.03
Nov. 9	464	19 34 29	1 58 8.638	54 21 0.98	7.004	26.53	075	6.90
	466	42 23	7.915	1.07			001 +.131	6.91 6.80
İ	467	56 29	6.573	0.44			7.131	0.09
Nov. 10	486	19 23 35	1 56 6.830	54 19 57-49	6.983	27.04	122	6.93
	487	30 35	6.177	57.10			o56 +.160	6.95 6.91
	492	53 35	4.019	55.83			,	0.91
Nov. 12	518	19 9 36	1 52 6.110	54 14 45-44	6.932	28.03	144	6.99
	519	12 58	5.798	45.32	6.931		112 086	7.01 7.02
	520	15 41	5.523	44.51	6.931			7.02
Nov. 13	538	19 2 58	1 50 8.314	54 10 36.62	6.901	28.50	152	7.02
	539	5 35	8.072	36.25			127 008	7.03 7.04
	540	8 35	7.811	35-55			098	
Nov. 23	571	18 15 11	1 33 42.968	52 35 5.52	6.501	32.49	176	6.83
	573	11 22	42.572	1.97			115	6.8 <sub>5</sub> 6.8 <sub>2</sub>
	576	31 29	41.322	34 50.03			+.083	0.02
Nov. 24	588	18 30 26	1 32 29.561	52 20 16.01	6.456	32.80	+.123	6.74
Nov. 27	601	17 51 29	1 29 32.819	51 32 24.60	6.325	33.56	115	6.49
,	602	54 28	32.678	22.65	5-5	55.5	086	6.50
	606	18 6 36	32.156	13.78			+.033	6.51
Nov. 28	627	17 49 18	1 28 46.100	51 14 55.78	+6.283	+33.78	090	6.40
,.20	629	55 28	45.857	51.17	, 0.203	1 33.70	030	6.41
	63ó	58 29	45.715	48.98		i e	.000	-6.41

TABLE III. — MERIDIAN MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

Date.	PLATE	Berlin M. T.	Mean Pla	CE 1900. O.	REDUCI APPAREN	TON TO	Parali	<b>ΑΧ Δ.</b>
DAIL.	No.	DERIAN RI. 1.	a	8	a	8	a	8
		h m s	h m s	. , ,,				
Nov. 29	660	17 44 29	1 28 6.042	50 56 50.04	+6.241	+33.97	092	-6.29
-	661	47 29	5.937	47.68		100 )	063	6.30
	666	18 2 43	5.401	36.14			+.086	6.29
Dec. 2	679	17 31 58	1 26 45.908	49 58 58.16	6.122	34-44	085	5-93
	680 681	34 35	45.836 45.782	56.09			060 031	5.94
		37 36		53-57			031	5-94
Dec. 3	698	17 29 35	1 26 32.552	49 38 34.61	6.085	34-54	068	5.80
	699	32 35	32.543	32.31			039	5.81
	700	35 35	32.472	29.66			010	5.81
Dec. 5	725	17 11 35	1 26 26.191	48 56 33.87	6.014	34.72	163	5.48
	726	14 46	26.163	30.94			133	5.49
	728	20 35	26.120	25.80			077	5.51
Dec. 6	756	17 8 35	1 26 32.899	48 34 49.01	5.981	34.77	155	5.33
	758	14 46	32.867	43.46			096	5.36
	759	17 35	32.854	40.80			070	5.36
Dec. 7	787	17 4 35	1 26 46.173	48 12 40.17	5-949	34.82	157	5.18
	790	13 35	46.208	31.62			072	5.21
	791	16 35	46.202	29.10			043	5.22
Dec. 8	821	17 14 30	1 27 6.125	47 49 55-39	5.919	34.84	029	5.06
	823	20 35	6.166	49.41			+.029	5.06
	824	23 35	6.187	46.74			+.057	5.05
Dec. 10	827	17 1 29	1 28 5.223	47 3 54-55	5.862	34.80	086	4.71
	832 833	16 28	5.474	40.22			+.054 +.083	4.72
	033	19 29	5.511	37.06			7.003	4.71
Dec. 11	847	16 58 22	1 28 44.370	46 40 22.84	5.837	34.76	084	4.54
	848 849	17 1 35 4 18	44.44 <sup>1</sup> 44.493	19.74 17.02			054 029	4·54 4·55
	049	7.5	44-493	1,.02			.029	4.33
Dec. 12	854	16 59 11	1 29 29.896	46 16 30.24	5.812	34.7I	046	4.37
	855	17 2 11	29.975	27.24			019	4.37
	856	5 29	30.039	23.54			+.012	4-37
Dec. 22	878	16 34 11	1 42 31.998	42 7 27.14	5.643	33.25	032	2.42
	880 881	40 11	32.382	20.78			+.020	2.42
	001	43 33	32.612	17.05	ı		+.050	2.42
Dec. 23	889	16 29 11	1 44 20.521	41 41 55.63	5.633	33.04	057	2.21
	890	32 22	20.746	52.27			029	2.21
	891	35 11	20.922	49.23			005	2.21
Dec. 24	903	16 28 35	1 46 14.490	41 16 15.80	5.623	32.80	044	2.00
	904	31 36	14.702	12.59			018	2.01
	906	37 35	15.155	6.06			+.033	2.01
Dec. 28	930	16 19 46	1 54 38.159	39 33 19.88	+5.596	+31.68	055	1.17
	931	22 27	38.375	17.06			033	1.17
	932	25 22	38.643	13.88			008	-1.18

TABLE IV. — MERIDIAN TRUE PLACES AND CORRECTIONS TO EPHEMERIS.

	PLATE	D	Obse	RVED.	0	-Е
DATE.	No.	BERLIN M. T.	a	δ	a	8
		h m s	h m s	• 1 11		"
Oct. 5	84	22 28 22	2 43 54.229	46 35 14.45	055	+ .46
	85	38 22	54.148	23.44	70	32
	90	23 8 35	53.954	50.89	75	36
Oct. 6	98	22 27 50	2 43 43.298	46 56 53.44	50	42
	100	<b>3</b> 6 36	43.223	57 1.27	46	36
	102	50 41	43.094	14.41	49	82
Oct. 7	110	22 31 22	2 43 28.499	47 18 24.42	35	62
	112	43 46	28.340	35.45	50	64
	113	46 59	28.320	38.39	33	75
Oct. 8	117	22 29 35	2 43 9.786	47 39 37-75	43	91
	118	34 29	9.736	42.01	24	86
	119	43 35	9.581	49.85	49	71
Oct. o	122	22 20 35	2 42 47.156	48 0 30.03	68	64
	123	23 46	47.098	32.57	71	43
	125	34 22	46.910	41.85	78	56
Oct. 10	129	22 23 18	2 42 20.200	48 21 17.09	97	54
	130	26 35	20.135	19.78	95	39
	131	29 43	20.060	22.56	103	46
Oct. 12	142	22 38 58	2 41 13.287	49 2 6.81	67	31
0000	143	41 40	13.213	8.94	69	16
	144	44 58	13.128	11.62	67	+ 08
Oct. 13	156	22 1 18	2 40 34.505	49 21 24.63	93	<b>– 01</b>
	157	4 50	34.408	27.72	89	+ 26
	160	18 46	33.989	38.87	97	- 15
Oct. 14	180	21 55 22	2 39 50.510	49 40 47.89	82	+ 16
	181	59 35	50.381	51.43	72	37
	182	22 2 29	50.290	53.76	70	39
Oct. 15	204	21 49 46	2 38 2.015	49 59 48.06	89	49
	205	52 35	1.916	50.25	92	53
	207	22 4 35	1.482	59.68	97	45
Oct. 16	232	21 45 22	2 38 8.980	50 18 23.70	89	42
	235	22 I 4I	8.359	36.08	77	19
	236	4 36	8.238	38.37	85	27
Oct. 21	258	21 24 59	2 32 35.712	51 44 4.06	142	62
	259	32 35	35.298	8.81	150	44
	260	35 46	35.128	11.11	148	+ 66
Oct. 23	272	21 20 23	2 29 51.135	52 14 20.68	143	- 03
-3	273	23 37	50.959	22.70	122	04
				1		
Oct. 24	286	21 16 43	2 28 22.564	52 28 29.56	157	+ 36
000.24	287	25 58	21.985	34.62	154	11
	288	28 58	21.787	36.54	161	29
Ont an		20.56.42	2 26 57 028	52 41 46.73	156	12
Oct. 25	311 312	20 56 43 59 18	2 26 51.028 50.867	48.40	146	37
l i	314	21 11 33	50.055	54.98	-153	+ 26
	J. T					

TABLE IV. — MERIDIAN TRUE PLACES AND CORRECTIONS TO EPHEMERIS — Continued.

D	Plate	Decree M. C.	Obse	RVED.	0	-E
DATE.	No.	Berlin M. T.	a	δ	a	8
_		h m s	h m s	• / //		"
Oct. 26	329	20 55 46	2 25 14.389	52 54 31.22	141	+ .25
	330	58 35	14.200	32.51	143	13
	331	21 1 41	13.987	33.98	149	+ 4
Oct. 29	353	20 45 11	2 20 3.484	53 27 58.45	173	- 17
	354	48 11	3.254	59.88	174	0
	355	51 18	3.018	28 1.08	171	- 11
Nov. 1	360	20 32 35	2 14 25.545	53 53 49-57	233	42
	361	35 58	25.293	50.56	205	47
	362	38 43	25.056	51.47	220	40
Nov. 2	384	20 19 22	2 12 28.921	54 0 36.53	210	27
2,0,,	385	22 46	28.645	37.26	215	52
	386	30 29	28.014	39.46	203	39
Nov. 3	460					
MOA. 3	408	20 3 35	2 10 30.634	54 6 27.57	251	37
	411 414	16 41 29 50	29.531 28.424	30.55	258 257	37 40
•	4.4	29 30	20.424	33.31	-3/	•
Nov. 4	439	19 57 35	2 8 30.072	54 11 24.37	210	27
	44I	20 4 36	29.454	25.64	231	31
	443	17 58	28.308	28.30	257	12
Nov. 5	445	19 52 35	2 6 28.175	54 15 23.32	218	20
	447	58 35	27.654	24.11	236	28
	450	20 17 29	26.049	27.13	232	I
Nov. 9	464	19 34 29	1 58 15.567	54 21 20.61	254	63
-	466	42 23	14.918	20.69	225	58
	467	56 29	13.708	20.08	229	66
Nov. 10	486	19 23 35	1 56 13.691	54 20 17.60	210	65
	487	30 35	13.104	17.19	198	70
	492	53 35	11.162	15.96	195	42
Nov. 12	518	19 9 36	1 52 12.808	54 15 6.48	165	72
	519	12 58	12.617	6.34	160	34
	520	15 41	12.368	5.52	194	76
Nov. 13	538	19 2 58	1 50 15.063	54 10 58.10		88
1107. 13	539	19 2 58 5 35	1 50 15.803	57.72	219 225	76
	540	3 33 8 35	14.614	57.01	210	88
NT						
Nov. 23	571	18 5 11	I 33 49.293	52 35 31.18	204	1.14
	573 576	II 22	48.958 47.006	27.61	214	1.12
	576	31 29	47.906	15.70	207	1.32
Nov. 24	588	18 30 26	1 32 36.140	52 20 42.07	200	1.48
Nov. 27	601	17 51 29	1 29 39.029	51 32 51.67	131	1.72
	602	54 28	38.917	49.71	143	1.62
	606	18 6 36	38.514	40.83	129	1.82
Nov. 28	627	17 49 18	1 28 52.293	51 15 23.16	113	1.86
	629	55 28	52.110	18.54	109	1.88
	630	58 29	51.998	16.35	-129	-1.82
					<u> </u>	

TABLE IV. — MERIDIAN TRUE PLACES AND CORRECTIONS TO EPHEMERIS — Continued.

DATE. No.  Nov. 29 660 661 666 Dec. 2 679 680 681 Dec. 3 698 699 700 Dec. 5 725 726 728 Dec. 6 756 759 Dec. 7 787 790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854 855 856	h m s 17 44 29 47 29 18 2 43 17 31 58 34 35 37 36 17 29 35 32 35 35 35 17 11 35 14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35 16 35	a  h m s 1 28 12.191 12.115 11.728  1 26 51.945 51.898 51.873  1 26 38.569 38.589 38.547  1 26 32.042 32.044 32.057  1 26 38.725 38.752 38.765  1 26 51.965 52.085 52.108	\$  . , , , , , , , , , , , , , , , , , ,	112 123 119 112 129 119 149 108 129 132 137 138	8 -1.80 1.85 1.63 1.79 1.69 1.67 1.95 1.62 1.70 1.70 1.70 1.70 1.29 1.20 1.34
Dec. 2 679 680 681 Dec. 3 698 699 700 Dec. 5 725 726 728 Dec. 6 756 759 Dec. 7 787 790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	17 44 29 47 29 18 2 43 17 31 58 34 35 37 36 17 29 35 32 35 35 35 17 11 35 14 46 20 35 17 8 35 14 46 17 35 14 45 17 35	1 28 12.191 12.115 11.728 1 26 51.945 51.898 51.873 1 26 38.569 38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	50 57 17.72 15.35 3.82 49 59 26.67 24.59 22.07 49 39 3.35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	124 123 119 112 129 119 149 108 129 132 137 138	-1.80 1.85 1.63 1.79 1.69 1.67 1.95 1.62 1.70 1.70 1.70 1.70 1.29 1.20
Dec. 2 679 680 681 Dec. 3 698 699 700 Dec. 5 725 726 728 Dec. 6 756 759 Dec. 7 787 790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	18 2 43  17 31 58  34 35  37 36  17 29 35  32 35  35 35  17 11 35  14 46  20 35  17 8 35  14 46  17 35  14 45  17 35	12.115 11.728 1 26 51.945 51.898 51.873 1 26 38.569 38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	15.35 3.82 49 59 26.67 24.59 22.07 49 39 3.35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	123 119 112 129 119 149 108 129 132 137 138	1.85 1.63 1.79 1.69 1.67 1.95 1.62 1.70 1.70 1.70
Dec. 2 679 680 681 Dec. 3 698 699 700 Dec. 5 725 726 728 Dec. 6 756 759 Dec. 7 787 790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	18 2 43  17 31 58  34 35  37 36  17 29 35  32 35  35 35  17 11 35  14 46  20 35  17 8 35  14 46  17 35  14 45  17 35	11.728 1 26 51.945 51.898 51.873 1 26 38.569 38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	3.82 49 59 26.67 24.59 22.07 49 39 3.35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	119 112 129 119 149 108 129 132 137 138	1.63 1.79 1.69 1.67 1.95 1.62 1.70 1.70 1.70
Dec. 2 679 680 681  Dec. 3 698 699 700  Dec. 5 725 726 728  Dec. 6 756 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	17 31 58 34 35 37 36 17 29 35 32 35 35 35 17 11 35 14 46 20 35 17 8 35 14 46 17 35 14 45 17 35	1 26 51.945 51.898 51.873 1 26 38.569 38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	49 59 26.67 24.59 22.07 49 39 3.35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21	112 129 119 149 108 129 132 137 138	1.79 1.69 1.67 1.95 1.62 1.70 1.70 1.70
Dec. 3 698 699 700  Dec. 5 725 726 728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	34 35 37 36 17 29 35 32 35 35 35 17 11 35 14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35	51.898 51.873 1 26 38.569 38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	24.59 22.07 49 39 3.35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	129 119 149 108 129 132 137 138 109 125 131	1.69 1.67 1.95 1.62 1.70 1.70 1.79 1.70
Dec. 3 698 699 700  Dec. 5 725 726 728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	37 36  17 29 35	51.873  1 26 38.569     38.589     38.547  1 26 32.042     32.044     32.057  1 26 38.725     38.752     38.765  1 26 51.965     52.085	22.07 49 39 3.35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	119 149 108 129 132 137 138 109 125 131	1.67 1.95 1.62 1.70 1.70 1.79 1.70
Dec. 3 698 699 700  Dec. 5 725 726 728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	17 29 35 32 35 35 35 17 11 35 14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35	1 26 38.569 38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	49 39 3-35 1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	149 108 129 132 137 138 109 125 131	1.95 1.62 1.70 1.70 1.79 1.70
Dec. 5 725 726 728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	32 35 35 35 37 11 35 14 46 20 35 17 8 35 14 46 17 35 14 45 17 35	38.589 38.547 1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	1.04 38 58.39 48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	108 129 132 137 138 109 125 131	1.62 1.70 1.70 1.79 1.70 1.29
Dec. 5 725 726 728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	35 35 17 11 35 14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35	38.547  1 26 32.042 32.044 32.057  1 26 38.725 38.752 38.765  1 26 51.965 52.085	38 58.39  48 57 3.11 0.17 56 55.01  48 35 18.45 12.87 10.21  48 13 9.81	129 132 137 138 109 125 131	1.70 1.70 1.79 1.70 1.29 1.20
Dec. 5 725 726 728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	17 11 35 14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35	1 26 32.042 32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	48 57 3.11 0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	132 137 138 109 125 131	1.70 1.79 1.70 1.29 1.20
Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35	32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	137 138 109 125 131	1.79 1.70 1.29 1.20
Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	14 46 20 35 17 8 35 14 46 17 35 17 4 35 13 35	32.044 32.057 1 26 38.725 38.752 38.765 1 26 51.965 52.085	0.17 56 55.01 48 35 18.45 12.87 10.21 48 13 9.81	137 138 109 125 131	1.79 1.70 1.29 1.20
728  Dec. 6 756 758 759  Dec. 7 787 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	20 35 17 8 35 14 46 17 35 17 4 35 13 35	32.057  1 26 38.725	48 35 18.45 12.87 10.21 48 13 9.81	138 109 125 131	1.70 1.29 1.20
758 759 759 759 767 790 791  Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854	14 46 17 35 17 4 35 13 35	38.752 38.765 1 26 51.965 52.085	12.87 10.21 48 13 9.81	125	1.20
758 759 759 759 767 790 791 767 790 791 767 790 791 767 823 824 767 824 824 768 768 824 768 824 768 824 768 824 768 824 768 824 768 824 768 824 824 768 824 824 768 824 824 824 824 824 824 824 824 824 82	14 46 17 35 17 4 35 13 35	38.752 38.765 1 26 51.965 52.085	12.87 10.21 48 13 9.81	125	1.20
759 Dec. 7 787 790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	17 35 17 4 35 13 35	38.765 1 26 51.965 52.085	48 13 9.81		1.34
790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	13 35	52.085			
790 791 Dec. 8 821 823 824 Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	13 35	52.085		118	1.32
Dec. 8 821 823 824  Dec. 10 827 832 833  Dec. 11 847 848 849  Dec. 12 854 855		T -	1 4.25	101	1.57
Dec. 10 827 832 832 833 Dec. 11 847 848 849 Dec. 12 854		32.100	12 58.70	112	1.27
Dec. 10 827 832 832 833 Dec. 11 847 848 849 Dec. 12 854	17 14 30	1 27 12.015	47 50 25.17	92	1.59
Dec. 10 827 832 833 Dec. 11 847 848 849 Dec. 12 854	20 35	12.114	19.19	93	1.70
832 833 Dec. 11 847 848 849 Dec. 12 854	23 35	12.163	16.53	93	1.48
832 833 Dec. 11 847 848 849 Dec. 12 854	17 1 29	1 28 10.999	47 4 24.64	105	1.75
833 Dec. 11 847 848 849 Dec. 12 854 855	16 28	11.390	10.30	92	1.33
848 849 Dec. 12 854 855	19 29	11.456	7.15	99	1.67
848 849 Dec. 12 854 855	16 58 22	1 28 49.123	46 40 53.06	110	1.78
Dec. 12 854 855	17 1 35	50.224	49.96	106	1.61
855	4 18	50.301	47.23	109	1.63
855	16 59 11	1 29 35.662	46 17 0.58	132	1.77
	17 2 11	35.768	16 57.58	149	1.75
	5 29	35.863	53.88	145	2.14
Dec. 22 878	16 36 11	1 42 37.609	42 7 57.97	70	1.77
880	40 11	38.045	51.61	81	1.68
881	43 33	38.305	47.88	66	1.88
Dec es   60	-6		47 40 25 45	96	7.40
Dec. 23 889	16 29 11	1 44 26.097 26.350	41 42 26.46 23.10	88	1.40 1.37
890 891	32 22 35 II	26.550	20.06	111	1.34
	35 **	20.550			3-
Dec. 24 903	16 28 35	1 46 20.069	41 16 46.59	64	1.03
904	31 36	20.307	43.38	70	1.00
906	37 35	20.811	36.85	45	1.23
Dec. 28 930	37 33	I 54 43.700	39 33 50.43	57	1.69
931	16 19 46	43.938	47.55	76	1.62
932		44.231	44.36	- 55	-1.72

TABLE V. - PARALLAX PLATE MEASURES.

PLATE	Star.	P. S. T.	x	40	PLATE	C	реж	-	44
No.	STAR.	P. S. 1.		у	No.	STAR.	P. S. T.	x	y
			1900 Oct. 6	С				1900	**
92 E.	a	8 28 6	- 23750	- 9932	104 W.		16 41 15	Oct. 6 — 16816	H - 55508
,	ъ		- 24947	+ 56459		b	4. 4.	- 17991	+ 10874
	c d		- 21818 - 6965	+ 36098		c d		- 14871	- 9496
	•		+ 1866	+ 48090 + 359				- 31 + 8834	+ 2510 -45206
	f		+ 7365	- 29469		f		+ 14356	- 75036
	g h		+ 13548	+ 70261		g h		+ 20519 + 38216	+ 24672
	i		+ 31233 + 49637	- 2758 + 33142		i		+ 56614	-48336 -12450
	1		+ 17529	<b>- 59661</b>		n		+ 3722	+ 70220
	m		- 33519	-40410		0	. 1	<b>-</b> 32036	+ 64657
17		•	Oct. 6	С	737	_		Oct. 6	С
93 E.	a b	8 31 0	- 23695 - 24895	- 10205 + 56155	105 W.	a b	16 46 12	— 16710 — 17936	- 55952 + 10415
	C		- 21770	+ 35785		c		-14812	- 9942
	d		- 6922	+47800		d		+ 29	+ 2066
	f		+ 1879 + 7389	+ 59 -29723		f		+ 8922 + 14460	- 45656 - 75464
	g		+ 13584	+ 69969		E		+ 20566	+ 24248
	h		+ 31255	- 3021		h		+ 38323	- 48740
	i		+ 49666 + 17544	+ 32883 - 59905		i n		+ 56702 + 3733	- 12839 + 69790
	m		-33485	-40686		0		- 31998	+ 64136
72	_ '	0	Oct. 6	H		_		Oct. 6	H
94 E.	a b	8 33 47	- 23690 - 24884	- 10488 + 55905	106 W.	a b	16 50 0	- 16632 - 17822	- 56328 + 10046
	C		- 21754	+ 35530		C		-14714	- 10336
	d		- 6903	+ 47537		d		+ 96	+ 1686
	f		+ 1930 + 7405	- 192 - 30024		f		+ 8988 + 14504	- 46044 - 75888
	g		+ 13603	+ 69717		g		+ 20644	+ 23854
1	h i		+ 31310	- 3274		h		+ 38374	-49146
l	li		+ 49744 + 17587	+ 32633 - 60201		i n		+ 56766 + 3831	- 13251 + 69402
	m		- 33464	-40960		0		-31932	+ 63802
17			Oct. 6	н		_		Oct. 6	H
95 E.	a b	8 43 0	- 23581 - 24780	- 11334 + 54976	107 W.	a b	16 59 35	- 16490 - 17710	-57097 + 9210
ł	C		- 21651	+ 34628		c		- 14580	-11144
[	d		- 6810	+ 46631		d		+ 238	+ 883
1	f		+ 2016 + 7518	— 1076 — 30884		f	ł	+ 9135 + 14650	-46834 -76632
j	g		+ 13693	+ 68759		g		+ 20750	+ 23068
ł	h		+ 31373	- 4213		h		+ 38495	-49910
ŀ	li		+ 49777 + 17682	+ 31645 - 61048		i n		+ 56885 + 3915	- 14012 + 68588
	m		-33351	-41792		0	į	-31805	+ 62986
	_	0 .4	Oct. 6	C				Oct. 6	H
96 E.	a b	8 46 I	- 23524 - 24705	- 11618 + 54737	108 W.	a b	17 3 12	- 16530 - 17684	- 57489 - 8027
	C		-21607	+ 34361		c		- 14583	+ 8931 11494
	d		- 6747	+ 46364		d		+ 280	+ 570
	f		+ 2029 + 7553	- 1383 -31162		f		+ 9117 + 14626	- 47238 - 77054
	g h		+ 13778	+ 68528		g		+ 20841	+ 22722
			+ 31366	- 4479		h		+ 38481	-50343
	i 1		+ 49840 + 17718	+ 31435 - 61321		i n		+ 56910 + 4048	- 14416 + 68260
	m		-33286	-42091		ō		-31693	+ 62693
				L					

TABLE V. - PARALLAX PLATE MEASURES - Continued.

134 E. a 7 26 11 -53028 +58451 140 E. a		1000	
	1	Oct. 12	С
	7 57 5	-52221	+ 55699
b -31659 +59761 b		- 30858	+ 57010
C   -22826   +33403   C		- 21996	+ 30643
d   -19314   -15688   d	-	- 18452	- 18420
f + 2268 + 34722   e f f f f f	•	+ 3048	+ 32018
<b>g</b> + 57342 + 45932 <b>g</b>	1	+ 9247 + 58176	-33927 +43299
m + 7497 - 51274   n		+ 8391	- 53911
n +41287 -63240 n	ı	+ 42190	-65897
Oct. 12 C		Oct. 12	С
135 E. a 7 28 58 -52948 +58274 145 W. a		-35955	+ 10896
b -31585 +59559 b		-14586	+ 12204
C		- 5734 - 2094	- 14182 - 63248
+ 2329 + 34494	1	+ 19339	- 12812
f + 8458 -31440 f		+ 25582	- 78717
		+ 74500	- 1556
m + 7600 - 51450 0		-52839	+ 25018
n +41368 -63452 p	'	+ 56000	+ 52500
136 E. a 7 32 35 Oct. 12 H + 57890 146 W. a	16 43 42	Oct. 12	H + 10573
b   732 35   52760   737695   140 W.   a   b		- 35834 - 14447	+ 11897
C   -22614   +32802   C	1	- 5584	- 14499
d   -19042   -16226   d	l	- 1998	-63541
+ 2479 + 34175   e		+ 19472	-13137
f + 8596 -31728 f	i	+ 25712	<b>-</b> 78995
	1	+ 74638 - 52701	- 1863 + 24709
1 -   n   +41517   -63756   p	l l	+ 56154	+ 52230
Oct. 12 C		Oct. 12	C
137 E. a 7 40 8 -52708 +57170 147 W. a	16 51 47	- 35594	+ 9939
b   -31326   +58474   b		- 14207	+ 11268
C   -22499   +32116   C   -18884   -16908   d		- 5356	- 15146
d   -18884   -16908   d   + 2585   +33460   e	ı	- 1706 + 19714	- 64243 - 13779
f + 8815 - 32410 f		+ 25933	-79710
g + 57683 + 44766 g	:	+ 74908	- 2509
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		- 52459	+ 24082
n +41750 -64393 p	<b>)</b>	+ 56394	+ 51564
138 E. a 7 44 8 -52532 +56868 148 W. a	16 57 47	Oct. 12 -35414	C + 9465
b   -31149   +58144   b		- 35414 - 14014	+ 10774
C   -22358   +31794   C		- 5169	- 15646
d -18795 -17246 d	· 1	- 1562	-64714
+ 2695 + 33102   e f + 8017 - 32761   f		+ 19904	- 14286
		+ 26103 + 75062	- 80193 - 3048
m + 57825 + 44380 g m + 8063 - 52761 g		- 52244	+ 23623
n +41852 -64775 p		+ 56572	+ 51063
Oct. 12 C	1	Oct. 13	H
139 E. a 7 53 25 -52359 +56000 150 E. a		-66916	- 13962
b   -30986   +57264   b	l l	-66111	+ 32710
d   -22131   +30924   C   -18551   -18059   d		-23778 $-7385$	+ 55646 - 28782
+ 2938 + 32236 e		+ 326	+ 44700
f   + 9148   -33582   f		+ 9106	- 1792
g +58032 +43519 g		+ 13816	+ 31440
m + 8317 - 53563 h n + 42114 - 65552 n		+ 14936	+ 67479 -47638
n +42114 -65552 n		-31252 + 6964	- 60620
	_		

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	y
151 E.	a b c d e f g h m	7 19 23	1900 Oct. 13 - 66771 - 65981 - 23784 - 7252 + 353 + 9233 + 13863 + 14987 - 31139 + 7077	C - 14379 + 32329 + 55151 - 29105 + 44226 - 2165 + 30950 + 67001 - 48042 - 60972	165 W.	a b c d e f g h	16 53 20	1900 Oct. 13 -47698 -46861 - 4574 + 11982 + 19516 + 28449 + 33112 + 34206 -49618 + 71122	H - 62921 - 16206 + 6632 - 77664 - 4308 - 50706 - 17571 + 18489 + 38556 + 22029
152 E.	a b c d e f g h m	7 21 58	Oct. 13 - 66746 - 65956 - 23670 - 7190 + 434 - 9310 + 13970 + 15064 - 31070 + 7174	H - 14658 + 32070 + 54922 - 29410 + 43952 - 2375 + 30750 + 66710 - 48312 - 61265	166 W.	a b c d e f g h o	17 1 0	Oct. 13 - 47376 - 46571 - 4301 + 12202 + 19809 + 28684 + 33324 + 34469 - 49304 + 71389	C -63508 -16798 + 6008 -78205 - 4918 -51250 -18155 +17890 +37992 +21395
153 E.	a b c d e f g h m	7 35 9	Oct. 13 - 66346 - 65532 - 23312 - 6818 + 822 + 9698 + 14315 + 15468 - 30702 + 7532	C - 15798 + 30940 + 53793 - 30541 + 42895 - 3552 + 29654 + 65668 - 49450 - 62375	167 <b>W</b> .	a b c d e f g h o	17 3 58	Oct. 13 - 47244 - 46424 - 4214 + 12372 + 19922 + 28816 + 33429 + 34596 - 49208 + 71499	H - 63722 - 16936 + 5816 - 78494 - 5134 - 51462 - 18379 + 17631 + 37751 + 21186
163 W.	a b c d e f g h o p	16 46 58	Oct. 13 - 47873 - 47090 - 4793 + 11770 + 19346 + 28257 + 32883 + 33994 - 49786 + 70917	H -62442 -15692 + 7133 -77141 - 3784 -50213 -17072 + 19012 + 39091 + 22530	168 W.	a b c d e f g h o p	17 12 0	Oct. 13 -47028 -46210 - 3965 + 12584 + 20182 + 29040 + 33667 + 34839 -48976	C -64338 -17631 + 5147 -79004 - 5770 -52107 -19039 +17020 +37121 +20559
164 W.	a b c d e f g h o p	16 49 35	Oct. 13 - 47764 - 46974 - 4692 + 11906 + 19428 + 28371 + 32968 + 34101 - 49719 + 71038	C -62592 -15860 + 6906 -77287 - 4010 -50354 -17244 +18783 +38843 +22306	169 W.	a b c d e f g h o	17 14 58	Oct. 13 - 46906 - 46063 - 3870 + 12726 + 20268 + 29173 + 33759 + 34904 - 48866 + 71794	H -64637 -17879 + 4909 -79256 - 6008 -52348 -19300 +16749 +36841 +20288

TABLE V. - PARALLAX PLATE MEASURES - Continued.

No.   No.						-		T		
170 E.   a	Plate No.	STAR.	P. S. T.	x	у	Plate No.	Star.	P. S. T.	x	y
170 E.   a					C					**
b	E				-	T				
C	170 E.		7 29 35			175 E.		8 2 0		
d										
Part										
F						1	_			
R										
1		g		+ 2266			g		+ 3321	
Tyle				+ 5248	+ 72995		h		+ 6295	+ 70207
171 E. a 7 32 35					+ 24965		_	}	+ 27904	
171 E. a 7 32 35				+ 56421						
171 E.		п		+ 8240	-52200		n		+ 9270	<b>-</b> 55040
b	_							_		· ·
C	171 E.		7 32 35			176 E.		8 5 15		
d				• •						
e   -18154   +69875   e     -17188   +67027   f							-	1		•
f						,			_	
R		f								
h				-				ì		
i							h			
Table   Tabl					+ 24735		i		+ 27968	+ 21856
172 E. a 7 36 47				+ 56496				ł		
172 E.   a		n					n		_	-55313
b   -38764						_		1	•	1
C	172 E.		7 36 47	-63593		177 E.		8 14 51		
d										
Total										
F									- 168ro	
S				_	2					- 1
h										
m		h								
173 E.  173 E.  175 C.  176 C.  177 E.  178 C.  178 E.  178 B.  178 E.  178 B.  178 E.  178 B.  178 E.  178 B.  178 E.  178 B.  178 E.  178 B.  178 B.  178 B.  178 E.  178 B.  178 B.  178 B.  178 E.  178 B.					+ 24372		_	ļ :	+ 28290	+ 21049
T73 E.    Cot. 14										2.0
173 E.		n					n			
b	F			Oct. 14		O T	_			
C	173 E.		7 50 8			178 E.		8 17 51	• •	•
d										
C								[		
f							_			
Table		f		- 12613	+ 45144			<b>i</b>	-11641	_
h		g		+ 2930	+ 5258		8	1		,
m h						ŀ				
174 E. R 7 53 0 Ct. 14 C C							l	[		
Try E.    C							1			
174 E. a 7 53 0 -63083 - 8530   187 W. a 16 37 43 -43672 -51907   -18836 -30677   -5320 -78830   -7883	l	_			l .				_	
b	174 E.		7 53 0			187 W.		16 37 42		
c     -24738     -35471     c     -5320     -78830       d     -23240     +27062     d     -3834     -16335       e     -17541     +68119     e     +1787     +24786       f     -12485     +44927     f     +6885     +1546       g     +3030     +5014     g     +22417     -38347       h     +5992     +71014     h     +25392     +27671       i     +27592     +22966     i     +47001     -20427       m     +57203     +7703     0     +23181     +47935	• • •		• • •					3, 43		
e   -17541   +68119   e   + 1787   +24786   f   -12485   +44927   f   +6885   +1546   g   +22417   -38347   h   +5992   +71014   h   +25392   +27671   i   +27592   +22966   i   +47001   -20427   m   +57203   +7703   0   +23181   +47935									-	- 78830
f     -12485     +44927     f     +6885     +1546       g     +3030     +5014     g     +22417     -38347       h     +5992     +71014     h     +25392     +27671       i     +27592     +22966     i     +47001     -20427       m     +57203     +7703     0     +23181     +47935					1		l			
g + 3030 + 5014 g + 22417 - 38347 h + 5992 + 71014 h + 25392 + 27671 i + 27592 + 22966 i + 47001 - 20427 m + 57203 + 7703 0 + 23181 + 47935										
h								1		+ 1546
i +27592 +22966 i +47001 -20427 m +57203 +7703 0 +23181 +47935		g h					g h			
m + 57203 + 7703 0 + 23181 + 47935					ا شد ا					
							1			

TABLE V. - PARALLAX PLATE MEASURES - Continued.

No.	STAR.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	æ	y
			1900 Oct. 14	С				1900 Oct. 14	н
188 W.		16 40 48	-43575	-52119	193 W.		17 10 36	-42456	-5443I
	ь	•	- 18734	-30929	10	b	-, 5-	-17648	-33233
	c		<b>-</b> 5233	<b>-</b> 79088		C		- 4096	-81362
	d		- 3739	- 16572		d		<b>– 2655</b>	- 18882
	•		+ 1908	+ 24562		•	ļ	+ 2958	+ 22273
	f		+ 7008	+ 1305		f		+ 8088	- 989
	g h	i	+ 22539	- 38576	1	g h		+ 23622 + 26545	-40843
	i		+ 25504 + 47136	+ 27442 - 20638		ī		+ 48188	+ 25164 - 22911
	•		+ 23253	+ 47696		ò	[	+ 24304	+ 45393
	p		+ 23436	+ 59829		P		+ 24454	+ 57548
l i	-		Oct. 14	н		-	1		Н
189 W.		16 45 45	-43364	- 52508	195 E.		7 29 25	Oct. 15 - 51342	- 6426
109	ь	20 43 43	- 18542	- 31306	193 D.	b	1 29 23	- 36999	+ 12224
	č		- 5008	- 79442	l i	C		- 18743	+ 6943
	ď		- 3545	<b>– 16961</b>		đ		- 18604	+ 44054
	•		+ 2079	+ 24193		•		- 447	+ 69025
	f		+ 7178	+ 933		f		+ 5942	- 19455
	g		+ 22711	- 38951		g		+ 26048	-12347
	h i		+ 25659	+ 27065		h i		+ 29977	+ 23194
	ò		+ 47284 + 23424	-21041 +47318		m		+ 39604 + 50278	+ 33080 - 23457
	p		+ 23594	+ 59444		n		+ 50473	-11343
i	-		Oct. 14	С				Oct. 15	c
190 W.		16 56 15	-43008	-53322	196 E.		7 33 58	-51208	- 6782
-90	b	20 30 23	- 18173	-32116	- yo	b	7 33 30	-36858	+ 11850
	c		- 4606	- 80224		C		- 18589	+ 6564
	d		<b>— 3166</b>	-17779		đ	1	- 18440	+43665
	•		+ 2432	+23364		•		- 248	+ 68666
	f		+ 7560	+ 64		f		+ 6100	- 19832
	g h		+ 23100	- 39762		g h		+ 26220	-12736
	i		+ 26034 + 47642	+ 26256 + 21816		i		+ 30150 + 39777	+ 22768 + 32677
	•		+ 23764	+ 46478	1	m		+ 50452	- 23885
	p		+ 23954	+ 58616		n		+ 50652	-11757
			Oct. 14	н				Oct. 15	н
191 W.		16 59 15	-42002	- 53606	197 E.		7 44 15	- 50875	- 766g
	b		<b>- 18086</b>	-32412		ъ	' '' '	- 36503	+ 10947
	C		<b>- 4536</b>	-80524		C	1	- 18236	+ 5674
	d		<b>– 309</b> 6	- 18026		d		<b>– 18068</b>	+ 42806
	f		+ 2588	+ 23116	l i	f		+ 113	+67742
	g		+ 7698 + 23148	- 116 -40044		E		+ 6449 + 26591	- 20727 - 13651
	ĥ		+ 26161	+ 26004	1	h		+ 30504	+ 21868
	i		+ 47784	- 22004		i		+ 40133	+ 31800
	0		+ 23898	+46221		m		+ 50803	- 24871
	P		+ 24068	+ 58366		n		+ 51000	- 12657
			Oct. 14	С				Oct. 15	С
192 W.		17 7 35	-42556	-54194	198 E.		7 47 11	- 50756	- 8009
	b		-17754	- 33006		ь		<b>-36395</b>	+ 10670
	c d		- 4232 - 2749	-81138 -18661		c d		- 18121 - 17994	+ 5396
			+ 2868	+ 22479		•		- 17994 + 172	+ 42520 + 67560
	f		+ 7968	- 774		ť		+ 6574	- 20080
	g h		+ 23488	<b>-40641</b>		E	l i	+ 26708	-13839
			+ 26438	+25364		h		+ 30598	+ 21670
	i		+ 48064	- 22696		i		+ 40228	+ 31588
	o p		+ 24211	+ 45606	l	m n		+ 50935	- 24962 - 12822
	r		+ 24371	+ 57756		-14		+ 51119	- 12832

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE No.	Star.	P. S. T.	x	y	PLATE No.	Star.	P. S. T.	x	y
No.			1900		No.			1900	
			Oct. 15	H				Oct. 15	н
199 E.		7 54 15	- 50499	<b>– 8491</b>	215 W.		16 42 43	- 29457	-51166
	b		-36129	+ 10126		Ъ	i	- 15071	- 32570
	C		- 17886	+ 4837		C		+ 3134	-37851
	d e		-17728	+ 41950		d		+ 3377	794
	ŧ		+ 488 + 6815	+ 66907 21580		f		+ 21606 + 27839	+ 24264 - 64265
	g		+ 26944	- 14504		g		+ 47994	-57213
	ĥ		+ 30859	+ 21036		ĥ	Ì	+ 51934	-21714
	i		+ 40490	+ 30943		i	ì	+61570	-11797
	m		+ 51166	- 25625		0	1	- 17849	+ 30584
	n		+ 51373	- 13502		P		-44271	+ 23533
			Oct. 15	н				Oct. 15	С
201 E.		8 4 43	<b>- 50121</b>	9408	216 W.		16 52 24	- 29015	- 51928
	ъ		-35754	+ 9215		ъ		- 14634	- 33323
	C		- 17501	+ 3926	l '	C		+ 3580	- 38570
	d •		- 17339	+ 41030		d e		+ 3759	- 1506
	f		+ 852 + 7184	+ 66021 - 22460	I	f		+ 21982 + 28315	+ 23532 - 64942
	8		+ 27311	- 15379		g		+ 48458	- 57836
	h		+ 31235	+ 20147	1	h	]	+ 52383	- 22347
	i		+40872	+ 30060	1	i	1	+61980	- 12438
	m		+ 51533	- 26530	i	0		- 17514	+ 29815
	n		+ 51733	- 14384		P		-43934	+ 22739
_			Oct. 15	C	l			Oct. 15	Н
202 E.		8 7 48	- 50030	- 9697	217 W.		16 54 46	- 28936	- 52104
	b		-35650 -35650	+ 8954 + 3668	li .	b	1	- 14558	-33502
	ď		- 17382 - 17224	+ 40766		C d		+ 3672 + 3849	- 38736 - 1680
	•	ļ	+ 948	+ 65746				+ 22042	+ 23375
	f	ļ	+ 7313	- 22730		ť	1	+ 28391	-65146
	g		+ 27456	- 15634	l	g	1	+48523	- 58047
	h		+ 31377	+ 19894	1	h		+ 52450	- 22532
	i		+ 40980	+ 29788	l	i	!	+ 62059	- 12626
	m		+ 51690	- 26778	l	0		- 17420	+ 29658
	n		+ 51859	- 14644		P	ļ	- <sub>43</sub> 808	+ 22583
337	_	-6 -6 -0	Oct. 15	H	0 117			Oct. 15	C
213 W.	a b	16 36 58	- 29684 - 25688	<b>- 50698</b>	218 W.	a b	17 2 15	- 28850 - 74650	- 52568
	c		- 15278 + 2924	- 32109 - 37403	ľ	c		- 14372 + 3800	- 34002 - 39335
	ď		+ 3144	- 343		ď		+ 4122	- 2265
	•	ļ	+ 21378	+ 24720		е		+ 22425	+ 22735
	f		+ 27608	-63815	l	f	1	+ 28438	- 65800
	g		+ 47728	- 56748	1	8	1	+ 48612	- 58795
	h		+ 51696	- 21283	l	h i	[ ]	+ 52680	-23242
	i		+61338	-11331	H	i	[	+62320	-13372
	O P		- 18072 - 44478	+ 31040	I	0		- 17000 - 43428	+ 29170
	<b>*</b>		Oct. 15	C 23995	1	P		_	+ 22172
214 W.		16 39 58	- 29493	- 50973	219 W.		17 5 46	Oct. 15 - 28476	H - 52897
	b		-15136	- 32358	,	ь	-, 3 -	- 14110	-34277
	c	}	+ 3078	-37609	1	C	}	+ 4080	-39570
	d		+ 3250	- 562	l	d		+ 4281	- 2490
	e		+ 21451	+ 24515		e		+ 22438	+ 22528
	f		+ 27828	- 64008		f		+ 28798	-65936
	g h	1	+ 47966 + 51869	- 56897 - 37404		g h		+ 48956	- 58851 - 53350
	i		+ 51009	- 21404 - 11468		i	1	+ 52846 + 62460	- 23370 - 13469
	ò		- 18004	+ 30789		ò		- 16959	+ 28834
	P		-44408	+ 23688		P		-43368	+ 21784

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE	C	D 6 70			PLATE	S	D.C. (1)		
No.	STAR.	P. S. T.	x	у	No.	STAR.	P. S. T.	<b>x</b>	y
			1900 Oct. 15	С				1900 Oct. 16	н
220 W.		17 12 48	- 28212	-53419	225 E.		7 35 15	- 56393	+ 64620
	b		<b>–</b> 13830	- 34836	,	b		-34599	- 10488
	C		+ 4385	-40092		C		- 32909	+ 12440
1	đ e		+ 4535 + 22732	- 3045 + 22075	İ	d •		- 22439 - 11006	+ 21192 + 25855
	f		+ 29148	-66465		ť		- 8 <sub>554</sub>	+ 71680
	g		+49282	- 59340		E		- 3224	+ 22830
	h		+ 53170	- 23859		h		+ 8676	+ 34062
	i		+ 62785 - 16738	- 13940 + 28296		i 1		+ 33966	+ 6302 - 17150
	p		-43124	+ 21206		m		+ 33154 + 11981	-39428
	-		Oct. 15	н				Oct. 16	C
221 W.		17 15 36	- 28122	- 53641	226 E.		7 39 58	- 56229	+ 64157
i	b		- 13726	-35042		b	' 0' 0	-34410	<del>-</del> 10898
	Ç		+ 4441	-40324		C		-32732	+ 12030
	d •		+ 4656 + 22814	- 3240 + 21778		d		- 22273 - 10820	+ 20802
	ť		+ 29202	-66684		f		- 8408	+ 25444 + 71209
	E		+49327	- 59622		g		- 3035	+ 22432
	h i		+ 53226	- 24166		h		+ 8853	+ 33648
	0		+ 62818 - 16622	- 14224 + 28075		i		+ 34124 + 33337	+ 5946 - 17524
	P		-43019	+ 21011		m		+ 12198	- 39824
			Oct. 16	С				Oct. 16	H
222 E.		7 17 35	- 57102	+ 66068	227 E.		7 46 58	-55874	+ 63664
	Ъ		- 35302	- 9022		ь		-34176	- II444
	c d		-33625 $-23145$	+ 13895 + 22670		c d		32443 21976	+ 11484 + 20246
	•		-11725	+ 27330		•		- 10540	+ 24897
	f		- 9248	+73130		f		- 8040	+ 70593
1	g h		- 3900	+ 24310		Ę		- 2746	+ 21866
	i		- 7982 + 33240	+ 35550 + 7798		h		+ 9154 + 34410	+ 33083 + 5310
	ī		+ 32438	- 15660		i		+ 33572	- 18156
	m		+ 11298	-37950		m		+ 12387	<b>-40406</b>
			Oct. 16	H				Oct. 16	C
223 E.	a b	7 21 45	- 56832	+ 65756	228 E.	a b	7 49 48	-55831	+ 63350
	C	i	-35122 -33422	- 9356 + 13594		C		— 34046 — 32344	- 11732 + 11207
	đ		- 22936	+ 22344		d		- 21891	+ 19972
	•		- 11489	+ 26968		•		- 10464	+ 24653
	f		- 9014 - 3714	+ 72758		f		- 8041 - 2648	+ 70356 + 21607
	h		+ 8204	+ 23964 + 35166		h		+ 9243	+ 32842
	i		+ 33456	+ 7418	į.	i		+ 34510	+ 5113
	1		+ 32626	- 16036		1		+ 33716	- 18346
	m		+ 11424	- 38346		m		+ 12582	<b>-</b> 40680
224 E.		7 26 45	Oct. 16	C	F		8 0 46	Oct. 16	H . 60484
*** E.	a b	/ 20 45	-56753 -34955	+ 65253 - 9820	230 E.	a b	0 0 40	- 55402 - 33648	+ 62484 12608
	C	]	- 33260	+ 13116		C		-31930	+ 10314
	d		- 22796	+ 21895		d		- 21458	+ 19070
	e f	1	- 11355 - 8925	+ 26559 + 72320		f		- 10016 - 7561	+ 23716 + 69446
			- 3557	+ 23544				- 7501 - 2228	+ 20709
	g h	1	+ 8343	+ 34774		g h		+ 9686	+ 31909
	i 1		+ 33619	+ 7040	i	i		+ 34933	+ 4156
	m m		+ 32822 + 11663	- 16411 - 38739		l m		+ 34121 + 12954	- 19300 - 41502
			, 11003	30/39				·4247	-41592
				·					

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE	STAR.	P. S. T.	x	у	PLATE	STAR.	P. S. T.	x	у
No.			1900		No.			1900	
			Oct. 16	C				Oct. 16	H
239 W.	a h	16 52 1	- 32581 - 32581	+ 20726	244 W.	a b	17 16 0	— 31569 — 9700	+ 18995 - 56110
	b C		- 10702 - 9017	- 54395 - 31462		c		- 8013	- 33204
	ď		+ 1452	- 22692		d		+ 2446	- 24437
	•	1	+ 12871	<b>–</b> 18060		•		+ 13877	- 19817
	f		+ 15335	+ 27773		f	į i	+ 16321	+ 26000
	g	i	+ 20698	- 21075		g		+ 21676	- 22812
	h i		+ 32622 + 57895	- 9858 - 27560		h i		+ 33595 + 58848	-11617 -39323
	n		- 29526	-37560 +35552		n		- 28527	+ 33806
	0		+ 4322	+ 52015		0		+ 5334	+ 50235
			Oct. 16	н				Oct. 21	H
240 W.		16 56 12	- 32404	+ 20434	247 E.		7 4 0	-60038	+ 57028
	b	3	- 10541	- 54708	- 7,	ь	' '	- 42946	+ 34873
	C		<b>-</b> 8858	-31779		C		-31879	+ 10650
	đ		+ 1619	-23021		d		- 21639	+ 87954
<b>l</b>	f		+ 13054	- 18380		f		<b>-</b> 16573	- 18788 - 15274
	g		+ 15513 + 20859	+ 27479 - 21381		g		+ 9500 + 21955	- 15274 + 23472
	ĥ		+ 32790	- 10169		ĥ		+ 31507	+ 15277
	i		+ 58052	-37877		1		+ 40563	<b>–</b> 18258
	n		- 29355	+ 35272		m		+ 42979	- 34095
	•		+ 4521	+ 51722			}		
			Oct. 16	C				Oct. 21	C
241 W.		17 1 0	-32212	+ 20067	248 E.	8	7 6 36	- 59909	+ 56820
	ь		- 10305 - 8636	- 55060 - 33734		b		-42834 -31745	+ 34686 + 10448
1	c d	1	+ 1841	-32134 $-23366$		ď		-31/45 -21545	+ 87740
	•	į	+ 13264	-18732		•		- 16419	- 18964
	f	1	+ 15702	+ 27100		f		+ 9654	- I5453
1	g		+ 21097	- 21726		g		+ 22086	+ 23335
	h		+ 32998	- 10518		h		+ 31640	+ 15143
i i	i n		+ 58267 - 20171	- 38230 + 34895		y 1		+ 46556 + 40723	- 68713 - 18417
	•	ł	+ 4688	+ 51347		m		+ 43149	-34223
			Oct. 16	н				Oct. 21	С
242 W.	a	17 7 8	-31943	+ 19624	250 E.		7 19 51	-59214	+ 55848
	Ъ	' '	<b>— 10088</b>	-55511		ъ		-42124	+ 33716
	C		- 8404	- 32565		C		-31043	+ 9482
	d	ŀ	+ 2086	- 23828		d e		- 20859 - 25527	+ 86822
	f		+ 13522 + 15949	- 19179 + 26622		f		- 15731 + 10355	— 19944 — 16438
	g	1	+ 21318	- 22187		g		+ 22772	+ 22345
l i	h		+ 33224	- 10995		h	1	+ 32319	+ 14166
	i	:	+ 58492	<b>– 38693</b>		y 1		+47233	-69700
	n	1	- 28866	+ 34437		n		+ 41410	- 19378 - 25205
	0	Į	+ 4967	+ 50859		_		+ 43831	- 35205 - T
243 W.	_	17 10 8	Oct. 16 - 31831	C	251 E.		7 05 40	Oct. 21 - 58920	H + 55472
243 W.	a b	17 10 8	- 31031 - 9967	+ 19415 - 55745	231 10.	b	7 25 43	- 50920 -41838	+ 55473 + 33337
	C		- 8 <sub>27</sub> 8	<b>-32806</b>		C		-30759	+ 9084
	đ		+ 2226	- 24046		đ		- 20515	+86385
į .	•	1	+ 13648	- 19404		•		- 15434	- 2035I
	f		+ 16085 + 21448	+ 26418 - 22381		f		+ 10656 + 23079	- 16842 + 21917
	g h		+ 33392	-11182		g h		+ 32636	+ 13732
	ī		+ 58664	- 38910		ī		+ 41694	- 19824
	n	1	- 28766	+ 34241		m		+44124	- 35650
	•	1	+ 5094	+ 50675					
	l	l		l					

TABLE V. - PARALLAX PLATE MEASURES - Continued.

No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   y   No.   Star.   P. S. T.   x   x   y   No.   Star.   P. S. T.   x   x   y   No.   Star.   P. S. T.   x   x   x   x   x   x   x   x   x	H + 17682 - 4465 - 28715
252 E.	+ 17682 - 4465
252 E.	+ 17682 - 4465
b	- 4465
C	1 2 7
d	
Color	+ 48635
The image is a contract of the image is a cont	- 58118
1	- 54620
1	- 15852
m	- 24040 + 65254
253 E. a 7 36 51	+61574
253 E.   a	+ 35801
253 E.   a	
b	С
c d -30155 + 8330 c d + 1501 d + 1651 e + 16846 e + 11274 - 17664 f + 42932 e + 23666 e + 23113 d e + 42932 e + 23666 e + 21113 d e + 42932 e + 55325 d e + 42290 d e + 44726	+ 17149 - 5012
d -19955 +85566 -21183 e +11651 +16846 f +11274 -17664 f +23666 +21113 g +55325 h +42290 -20624 n -37612 +24673 -35518 e +44726 -36438 e +42673 -35518 e +64857 -37612 +24673 -35518 -26530 -35518 +24673 -35518 -26530 -36438 e +64857 -37612 +24673 -35518 -26530 -36438 e +64857 -37612 +24673 -35518 -26530 -36438 e +64857 -36438 e +64857 -37612 +24673 -35518 -26530 -36438 e +64857 -36438 e +64857 -37612 +24673 -35518 -26530 -36438 e +64857 -36458 e +64857 -36458 e +64857 -36458 e +64857 -36458 e +64857 -36458 e +64857 -36458 e +64857 -36458 e +64857 -36458 e +	- 29236
f	+ 48092
g	— <sub>5</sub> 8660
h	- 55145 - 16076
1	- 16376 - 24561
The second secon	+64715
Oct. 21 C Oct. 2	+61040
254 E. a 7 40 1 -58166 +54397 268 W. a 16 56 15 -26530 -9454	+ 35294
254 E. a 7 40 1 -58166 +54397 268 W. a 16 56 15 -26530 -9454	н
b -41081 +32247 b - 9454	+ 16998
C     -20007   + 8022      C     + 1628	- 5154
	- 29396
d -19799 +85317 d +11788	+ 47961
f   -14684   -21411   0   +17000   + 143042	- 58804 - 55289
	- 16512
g   +23834   +20873   g   +55412 h   +33387   +12684   h   +65010	- 24706
1 + 42471 - 20868 n - 37475	+ 64544
m + 44895 - 36687 0 + 24768	+ 60901
<b>■</b>   <b>■</b>   <b>■</b>   <b>■</b>   <b>■</b>   <b>3</b> 5348	+ 35111
Oct. 21 H Oct. 21	С
264 W. a 16 39 36 -27494 + 18036 269 W. a 17 5 8 -26105	+ 16457
b   -10380   -4116   b   -8075   + 705   -28342   c   + 2132	- 5691
C     + 705     -28342     C     + 2132       d     + 10845     + 48970     d     + 12264	- 2992I + 4744I
e   +16037   -57778   e   +17480	- 59346
f +42116 -54272 f +43561	- 55854
<b>g</b> + 54568 - 15457 <b>g</b> + 55965	- 17061
h + 64053   -23672   h + 65501   n   -37007	- 25261
n   -38423   +65603   n   -37007     +23869   +61911   0   +25300	+ 64067 + 60401
Oct. 21 C Oct. 21 C	H
265 W. a 16 42 25 -27326 + 17836 270 W. a 17 7 55 -25948 b - 10218 - 4298 b 5 - 8844	+ 16267 - 5870
C   + 836   -28540   C   + 2283	- 30124
d + 11014 + 48744 d + 12421	+ 47253
e   +16164   -57974   e   +17610	- 59545
f +42236 -54467 f +43682	- 56040
g   +54632   -15691   g   +56082 h   +64200   -23868   h   +65624	-17246
n   + 05426   n   + 05024   n   - 36870	- 25442
0 + 24047 + 61736 0 + 25429	- 25442 + 63848
	- 25442 + 63848 + 60158

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE No.	Star.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	x	y
271 W.	a b c d e f g h n	17 14 48	1900 Oct. 21 - 25569 - 8446 + 2646 + 12784 + 18002 + 44068 + 56476 + 66006 - 36453 + 25793	C + 15870 - 6288 - 30528 + 46840 - 59948 - 56428 - 17646 - 25842 + 63445 + 59780	278 E.	a b c d e f g h i j l m	7 21 24	1900 Oct. 24 - 74013 - 55584 - 47860 - 41196 - 16460 - 14452 - 10860 + 3790 + 16914 + 25397 + 45392 + 40091	H - 10498 + 49534 - 4956 - 34616 + 33136 + 16506 + 52787 + 34142 - 17795 + 15731 - 53942 - 23692
275 E.	a b c d e f g h i j l m	7 7 20	Oct. 24 - 74765 - 56412 - 48705 - 42018 - 17358 - 15322 - 11735 + 2980 + 16088 + 24578 + 44525 + 39302	C - 9598 + 50404 - 4060 - 33700 + 34084 + 17404 + 53697 + 35062 - 16945 + 16627 - 53038 - 22810	291 W.	a b c d e f g h i j n o	16 28 53	Oct. 24 - 38916 - 20459 - 12754 - 6035 + 18677 + 20691 + 24323 + 39000 + 52117 + 60617 - 47453 - 16259	C -42962 +17130 -37427 -67086 + 741 -15932 +20420 +1750 -50303 -16671 +31040 +51135
276 E.	a b c d e f g h i j l m	7 9 58	Oct. 24 - 74702 - 56225 - 48552 - 41867 - 17144 - 15118 - 11550 + 3094 + 16230 + 24700 + 44675 + 39398	H - 9744 + 50278 - 4206 - 33857 + 33914 + 17238 + 53519 + 34867 - 17100 + 16469 - 53212 - 22964	292 W.	a b c d e f g h i j n o	16 31 46	Oct. 24 - 38706 - 20290 - 12527 - 5796 + 18848 + 20890 + 24512 + 39207 + 52302 + 60804 - 47278 - 16079	H -43112 +16964 -37563 -67242 +576 -16073 +20260 +1607 -50402 -16819 +30862 +50970
277 E.	a b c d e f g h i j l m	7 12 58	Oct. 24 - 74496 - 56093 - 48388 - 41700 - 17004 - 14942 - 11366 + 3270 + 16392 + 24869 + 44866 + 39584	C - 9918 + 50073 - 4390 - 34028 + 33689 + 17076 + 53344 + 34684 - 17256 + 16302 - 53399 - 23141	293 W.	a b c d e f g h i j n o	16 34 53	Oct. 24 - 38543 - 20088 - 12364 - 5648 + 19035 + 21077 + 24685 + 39376 + 52493 + 60964 - 47073 - 15886	C -43276 +16800 -37726 -67399 + 402 -16239 +20067 +1403 -50590 -17021 +30703 +50765

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	Star.	P. S. T.	x	у
294 W.	a b c d e f g h i j n o	16 44 I	1900 Oct. 24 - 37950 - 19525 - 11780 - 5057 + 19601 + 21629 + 25265 + 39932 + 53060 + 61554 - 46509 - 15322	H -43781 +16316 -38228 -67902 - 81 -16732 +19588 + 920 -51091 -17488 +30215 +50277	298 W.	a b c d e f g h i j n o	17 5 15	1900 Oct. 24 - 36630 - 18200 - 10449 - 3740 + 20918 + 22953 + 26551 + 41246 + 54383 + 62847 - 45192 - 14025	H -44889 +15207 -39355 -69016 -1202 -17838 +18467 -212 -52201 -18622 +29111 +49167
295 W.	a b c d e f g h i j n o	16 46 43	Oct. 24 - 37800 - 19372 - 11620 - 4899 + 19756 + 21789 + 25403 + 40080 + 53221 + 61672 - 46344 - 15186	C -43913 +16153 -38346 -68031 -209 -16857 +19430 +779 -51209 -17636 +30066 +50124	319 E.	a b c d f g h l	6 52 8	Oct. 26 - 60538 - 31790 - 29135 - 28891 - 1046 + 1621 + 888 + 27327 + 34709	C + 23180 + 35056 + 21255 - 22051 + 33593 + 2480 - 34801 - 30473 - 11747
296 W.	a b c d e f g h i j n o	16 55 8	Oct. 24 - 37230 - 18804 - 11068 - 4345 + 20300 + 22338 + 25933 + 40618 + 53772 + 62232 - 45807 - 14631	H - 44368 + 15734 - 38813 - 68476 - 657 - 17291 + 19004 + 353 - 51635 - 18053 + 29610 + 49699	320 E.	a b c d f g h l m	6 54 48	Oct. 26 - 60407 - 31662 - 28994 - 28711 - 898 + 1794 + 1065 + 27490 + 34854	H + 23010 + 34874 + 21114 - 22188 + 33448 + 2362 - 34948 - 30609 - 11879
297 W.	a b c d e f g h i j n o	16 58 8	Oct. 24 - 37080 - 18666 - 10904 - 4172 + 20455 + 22496 + 26136 + 40807 + 53970 + 62433 - 45654 - 14463	C -44518 +15555 -38950 -68635 -792 -17418 +18847 +1993 -51810 -18213 +29455 +49523	321 E.	a b c d f g h 1 m	6 57 15	Oct. 26 - 60234 - 31504 - 28781 - 28566 - 718 + 1932 + 1209 + 27636 + 35039	C + 22860 + 34730 + 20933 - 22357 + 33298 + 2216 - 35080 - 30770 - 12044

TABLE V. - PARALLAX PLATE MEASURES - Continued.

				···			<del>,</del>		
PLATE No.	STAR.	P. S. T.	x	y	PLATE No.	Star.	P. S. T.	x	у
			1900					1900	
322 E.			Oct. 26 59818	H	336 W.		16 38 58	Oct. 26	H
322 E.	a b	7 3 51	- 39010 - 31064	+ 22500 + 34360	330 W.	a b	10 30 50	- 20353 + 8398	- 7967 + 3890
	c		- 28410	+ 20565		c		+ 11072	- g86 <sub>2</sub>
	đ		- 28161	- 22726		đ		+ 11352	<b>– 53161</b>
	f		- 311	+ 32901		f		+ 39134	+ 2457
	g h		+ 2363	+ 1799		g h		+41852	- 28604 - 64849
	i		+ 1631 + 28045	-35492 -31166		n		+41159 -15154	-65858 +41987
	m		+ 35461	- 12450		0		-45354	+ 26208
			Oct. 26	С				Oct. 26	С
323 E.		7 7 2	- 59598	+ 22305	337 W.		16 42 8	- 20132	- 8134
	ъ		-30857	+ 34157		ъ		+ 8615	+ 3745
	Ç		- 28204	+ 20358		Ç		+ 11279	- 10032
	đ		- 27965 - 27	- 22917 + 32740		d f		+ 11585	- 53295
	g		- 77 + 2573	+ 1609		g		+ 39337 + 42065	+ 2324 - 28761
	h	,	+ 1805	-35642	1	h		+41381	- 66025
	1		+ 28244	-31356		n		- 14937	+41833
	m ´		+ 35616	- 12654		0		-45148	+ 26048
l	'		Oct. 26	H				Oct. 26	H
324 E.	a b	7 12 58	- 59251 - 59251	+ 21954	338 W.	a b	16 45 15	- 19930	- 8258
	c		— 30486 — 27801	+ 33816 + 20044		C		+ 8789 + 11477	+ 3591 - 10164
	ď		-27565	-23251		đ		+ 11751	-53473
	f		+ 264	+ 32375		f		+39514	+ 2133
	g		+ 2945	+ 1272		g		+ 42234	- 28 <b>9</b> 30
	h 1		+ 2231 + 28647	- 36007 - 31687		h n		+ 41523 - 14722	-66193 +41687
	m		+ 3602I	- 12966				-44895	+ 25897
			Oct. 26	С				Oct. 26	C C
325 E.	a	7 15 51	- 59040	+ 21788	339 W.		16 52 47	- 19446	<b>-</b> 8608
	b	, -5 5-	- 30274	+ 33651	009	Ъ		+ 9299	+ 3243
	C		- 27613	+ 19853		C		+ 11973	<i></i> 10516
	d f		- 2738o	- 23441		d f		+ 12243	- 5378I
•	g		+ 484 + 3151	+ 32213	]	g		+ 40036 + 42742	+ 1800 - 20270
	h		+ 2403	-36171		h		+ 42034	-66 <sub>52</sub> 8
	1		+ 28818	-31865		n		-14238	+41330
	m		+ 36218	-13152		0		<del>- 4444</del> 7	+ 25587
	_		Oct. 26	H		_		Oct. 26	н
326 E.	a b	7 22 51	- 58575 - 29821	+ 21347	340 W.	a b	16 55 46	- 19252 + 9493	- 8718
	c		- 27159	+ 33219 + 19434		c		+ 12171	+ 3112 -10610
ļ.	đ		- 26914	- 23850		đ		+ 12458	-53938
1	f		+ 932	+ 31776		f		+ 40214	+ 1680
	g h		+ 3601	+ 665		g		+ 42960	- 29390
	ī		+ 2873 + 29295	- 36586 - 32280		h n		+ 42262 - 14068	-66641 +41208
	m		+ 36669	- 13556		0		-44249	+ 25449
			Oct. 26	C				Oct. 26	C
327 E.		7 26 35	- 58357	+ 21184	341 W.		17 3 15	- 18742	<b>-</b> 9088
	b		- 29572	+ 33032		b		+ 9988	+ 2742
	ď		26906 26698	+ 19242		c d		+ 12650 + 12028	- 11000 - 54228
]	f		+ 1193	- 24074 + 31570		f		+ 12938 + 40713	- 54238 + 1303
]	g h		+ 3842	+ 486		g		+43410	- 29761
	h		+ 3084	-36822		h		+ 42698	- 66979
	1		+ 29521	- 32507 - 32507		n		- 13548 - 43745	+ 40805
	m		+ 36897	- 13770		0		<b>-43745</b>	+ 25052
				L	U	L			

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE No.	Star.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	x	у
342 W.	a b c d f g h n	17 6 8	1900 Oct. 26 - 18549 + 10195 + 12876 + 13153 + 40920 + 43644 + 42942 - 13364 - 43545	H - 9211 + 2661 - 11115 - 54408 + 1189 - 29872 - 67107 + 40724 + 24967	347 E.	a b c d e f g h	6 55 0	1900 Oct. 29 - 69729 - 60582 - 57672 - 35395 - 15166 - 1840 - 2691 + 14223 + 17408 + 10230	H + 8716 -11932 + 29387 + 19495 + 38019 + 19111 + 11144 + 16720 - 11692 - 51404
343 W.	a b c d f g h n	17 14 24	Oct. 26 - 18004 + 10744 + 13421 + 13685 + 41451 + 444194 + 43468 - 12803 - 43016	C - 9609 + 2238 - 11532 - 54784 + 826 - 30253 - 67511 + 40332 + 24587	348 E.	m b c d e f g h i	7 I 46	+ 55419 Oct. 29 - 69246 - 60062 - 57253 - 34960 - 14754 - 1390 - 2240 + 14657 + 17898 + 10810	- 3005 C + 8269 - 12330 + 28991 + 19108 + 37694 + 18789 + 10830 + 16449 - 51699
344 W.	a b c d f g h n o	17 17 35	Oct. 26 - 17812 + 10942 + 13632 + 13913 + 41644 + 44394 + 43708 - 12634 - 42836	H - 9728 + 2114 - 11669 - 54941 + 678 - 30393 - 67648 + 40181 + 24415	349 E.	m a b c d e f g h i l m	7 5 8	+ 55908 Oct. 29 - 68993 - 59856 - 56953 - 34683 - 14454 - 1140 - 1999 + 14900 + 18095 + 10944	- 3225  H + 8237 - 12394 + 28898 + 19010 + 37529 + 18605 + 10645 + 16230 - 12176 - 51876
345 E.	a b c d e f g h i l m	6 49 15	Oct. 29 - 70109 - 60927 - 58136 - 35832 - 15629 - 2269 - 3131 + 13810 + 17018 + 9893 + 55003	H + 8899 - 11686 + 29611 + 19746 + 38311 + 19375 + 11417 - 11357 - 51093 - 2687	350 E.	a b c d e f g h i l m	7 11 43	+ 56110 Oct. 29 - 68560 - 59343 - 56568 - 34257 - 14083 - 707 - 1536 + 15353 + 18636 + 11546 + 56621	- 3537 C + 7750 - 12872 + 28453 + 18604 + 37189 + 18303 + 10341 + 15956 - 12464 - 52191 - 3700
346 E.	a b c d e f g h i l m	6 51 47	Oct. 29 - 69928 - 69746 - 57956 - 35633 - 15464 - 2103 - 2942 + 13939 + 17189 + 10091 + 55175	C + 8734 - 11882 + 29446 + 19574 + 38149 + 19265 + 11300 + 16924 - 11496 - 51231 - 2738	351 E.	a b c d e f g h i l	7 14 36	Oct. 29 -68338 -59175 -56300 -34015 -13762 - 455 - 1315 +15581 +18789 +11628 +56793	H + 7784 - 12845 + 28439 + 18553 + 37072 + 18142 + 10208 + 15766 - 12649 - 52362 - 3985

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE No.	STAR.	P. S. T.	x	у	PLATE No.	Star.	P. S. T.	x	y
357 W.	a b c d e f g h i o p	16 52 54	1900 Oct. 29 - 25208 - 15994 - 13207 + 9065 + 29260 + 42620 + 41791 + 58696 + 61963 - 52368 - 42198	C - 16526 - 37124 + 4161 - 5689 + 12847 - 6022 - 13978 - 8360 - 36742 + 47926 - 15140	398 E.	a b c d e f g h l m	6 33 58	1900 Nov. 3 - 60228 - 56426 - 50524 - 39328 - 5651 + 12254 + 13272 + 16614 + 59356 + 69718	C - 23746 + 17561 + 538 + 20051 + 16194 + 8608 - 8180 - 29844 - 16506 + 5256
358 W.	a b c d e f g h i o	16 55 36	Oct. 29 - 25056 - 15883 - 13027 + 9250 + 29435 + 42795 + 41943 + 58830 + 62084 - 52090 - 42051	H - 16594 - 37197 + 4099 - 5797 - 12705 - 6198 - 14142 - 8561 - 36949 + 47900 - 15141	399 E.	a b c d e f g h l m	6 40 25	Nov. 3 - 59730 - 55951 - 49976 - 38818 - 5150 + 12726 + 13753 + 17107 + 59784 + 70166	H -23960 +17370 + 332 +19860 +15993 + 8422 - 8384 -30046 -16700 + 5047
359 W.	a b c d e f g h i o P	16 59 25	Oct. 29 - 24748 - 15526 - 12752 + 9508 + 29688 + 43064 + 42261 + 59150 + 62445 - 51922 - 41720	C - 16782 - 37370 + 3906 - 5920 + 12613 - 6272 - 14189 - 8602 - 36960 + 47660 - 15381	400 E.	a b c d e f g h l m	6 43 35	Nov. 3 - 59432 - 55642 - 49722 - 38542 - 4922 + 12982 + 14038 + 17385 + 60090 + 70398	C -24075 +17222 + 182 +19730 +15888 +8325 -8462 -30140 -16770 +4985
396 E.	a b c d e f g h 1 m	6 28 8	Nov. 3 - 60654 - 56891 - 50945 - 39780 - 6120 + 11790 + 12814 + 16192 + 58898 + 69209	C - 23633 + 17680 + 623 + 20160 + 16352 + 8776 - 7985 - 29668 - 16287 + 5467	401 E.	a b c d e f g h l m	6 49 48	Nov. 3 - 58997 - 55216 - 49270 - 38100 - 4448 + 13463 + 14467 + 17834 + 60562 + 70916	H -24220 +17098 + 43 +19556 +15707 +8133 -8660 -30318 -17018 +4753
397 E.	a b c d e f g h l	6 31 I	Nov. 3 - 60408 - 56666 - 50697 - 39556 - 5919 + 11997 + 13016 + 16423 + 59103 + 69453	H - 23717 + 17591 + 547 + 20103 + 16279 + 8701 - 8087 - 29757 - 16383 + 5393	402 E.	a b c d e f g h l m	6 52 58	Nov. 3 -58710 -54925 -48988 -37816 -4159 +13725 +14752 +18101 +60773 +71151	- 24315 + 16964 - 64 + 19458 + 15616 + 8048 - 8749 - 30428 - 17090 + 4669

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE					PLATE				
No.	STAR.	P. S. T.	x	у	No.	Star.	P. S. T.	x	y
			1900					1900	
404 E.		7 3 12	Nov. 3 57944	H - 24604	423 W.		17 18 47	Nov. 3 - 8338	C -38042
404 15.	Ъ	/ 3 - 2	- 54I48	+ 16688	423 11.	b	17 10 47	- 4543	+ 3257
	C		- 48202	- 326		d	1	+ 12553	+ 5737
	d		- 37025	+ 19145		•		+46247	+ 1897
	f		- 3383	+ 15320		f		+ 64096	<b>-</b> 5685
	g		+ 14516 + 15518	+ 7734 - 9034		g		+ 65084 + 68546	- 22475 - 44148
	h		+ 18899	-30719		0		- 30592	+ 20358
	1		+ 61602	<b>- 17405</b>	Ì	P		-69019	+ 27544
	m		+71957	+ 4354 C				Non a	•
417 W.		16 55 47	Nov. 3 10051	- 37692	424 W.		17 24 8	Nov. 3 - 7888	C -38145
4-7	b	35 47	- 6279	+ 3628	1-4	b	-, -4	- 4146	+ 3172
	đ	1	+ 10826	+ 6105		đ		+ 12966	+ 5663
	f		+44532	+ 2273		f		+ 46657	+ 1833
	g		+ 62402 + 63397	- 5316 -22112		h		+ 64521	- 5762 -44203
	h		+ 66838	-43740		ō		<b>-30154</b>	+ 20248
	0	[	-32332	+ 20726		P		-68562	+ 27441
	P	İ	<b>-70746</b>	+ 27932					_
419 W.		17 2 11	Nov. 3 - 9540	H -37806	425 W.		17 26 58	Nov. 3 - 7691	C -38146
7-7 '''	Ъ	1 -,	- 578 <sub>2</sub>	+ 3512	4-3 ***	Ъ	1/ 20 30	- 3932	+ 3153
	d	1	+11312	+ 6003		đ		+ 13190	+ 5646
	•		+ 45027	+ 2155		•		+ 46889	+ 1828
	f h	1	+ 62886 + 67326	- 5396 - 43838		f h		+ 64756	- 5744 - 44008
	0		-31832	- 43828 + 20598		0		+ 69201 29998	-44208 + 20208
	P		- 70265	+ 27788		P		-68399	+ 27389
	_		Nov. 3	C				Nov. 3	С
420 W.	a b	17 6 53	- 9224 - 5422	-37849	426 W.	a b	17 29 58	<b>-</b> 7479	- 38226
	ď		- 5433 + 11674	+ 3438 + 5918		ď		- 3711 +13396	+ 3078 + 5566
ł	•		+ 45358	+ 2076				+ 47082	+ 1742
	f		+63212	- 5500		f		+64951	- 5843
	g h		+ 64202 + 67667	- 22286 - 43035		h	1	+ 69398	-4427I
	0		- 31466	-43937 +20525		p		- 29740 - 68172	+ 20176 + 27366
	p		<b></b> 69860	+ 27737		•	i i		1 57355
			Nov. 3	С	_			Nov. 10	С
421 W.	a b	17 10 35	<b>- 8954</b>	-37910	472 E.	a b	6 16 36	-65739	+11994
	ď	]	- 514 <b>5</b> + 11978	+ 3400 + 5882		c		-65266 -57996	- 8538 -33340
	•		+ 45640	+ 2045		d		-38183	-11150
	f		+ 63508	- ·5551		•		-34766	+ 22176
	g h		+ 64490 + 67964	- 22334		f	1	+ 3499	+ 54414
	0	i	+ 07904 -31172	-44025 + 20478		g h		+ 4770 + 11280	+ 33280 + 15219
	P		-69580	+ 27688		ī		+ 37941	+ 550
		ì		_		m		+ 64750	+ 15795
422 W.	_	.,	Nov. 3	C	472 E		6 50 45	Nov. 10	H
1 *** W.	b	17 15 58	- 8538 - 4778	- 38010 + 3310	473 E.	a b	6 19 35	-65444 -64957	+ 12056 - 8466
	ď		+ 12332	+ 5778		c		- 57704	-33236
	•		+46022	+ 1926		đ		- 37930	-11124
	f		+ 63868	- 5648 - 5648		0		-34487	- 2220I
	g h		+ 64889 + 68321	- 22461 - 44086		f		+ 3818 + 5038	+ 54484 + 33286
	ō		- 30814	+ 20393		ĥ		+ 11513	+ 15206
	P		-69217	+ 27610		1		+ 38153	+ 538
						m		+ 65033	+ 15834
<u> </u>							l		

TABLE V. -- PARALLAX PLATE MEASURES -- Continued.

PLATE					PLATE				
No.	STAR.	P. S. T.	x	y	No.	STAR.	P. S. T.	x	y
			1900					1900	
474 E.	a	6 22 37	Nov. 10 -65264	+ 11991	495 W.		15 56 9	Nov. 10 - 18300	H + 16015
4/4 15.	b	0 22 3/	-64802	- 8539	493 11.	Ъ	15 50 9	- 17828	- 4552
	C		- 57555	- 33320		C		- 10479	- 29308
	đ		-37713	-11175		đ		+ 9258	- 7107
	0		-34277	+ 22175		0		+ 12694	+ 26195
	f		+ 3991 + 5233	+ 54407 + 33269		f		+ 50947 + 52157	+ 58433 + 37302
	h		+ II744	+ 15213		ĥ		+ 58668	+ 19265
	1		+ 38421	+ 547		0		-43358	- 9585
	m		+ 65206	+ 15765		P		-32290	+ 10430
_			Nov. 10	H				Nov. 10	H
475 E.		6 29 54	-64658	+ 11986	496 W.		IS 59 35	- 18012	+ 16095
	b		- 64189 - 56910	- 8529 -33335		b c		— 17548 — 10234	- 4484 - 29298
	ď		- 37096	- 11152		d		+ 9520	- 7032
	•		- 33696	+ 22168		e		+ 12986	+ 26252
	f		+ 4555	+ 54412		f		+ 51242	+ 58486
	g		+ 5806	+ 33277		g		+ 52441	+ 37335
	h		+ 12320 + 39005	+ 15209 + 562		h o		+ 58960 43076	+ 19302 - 9521
	m		+ 65826	+ 15801		P		-32024	+ 10520
			Nov. 10	н				Nov. 10	н
476 E.		6 32 25	-64496	+ 12022	498 W.		16 8 12	- 17348	+ 16198
	Ъ		-64021	- 8528		Ъ		<b>- 16875</b>	- 4358
	d		- 56766 - 56770	-33346 -11168		c d		- 9512	- 29114 - 6909
			-36910 -33514	+ 22180		•		+ 10201 + 13654	- 6898 + 26382
	f		+ 4742	+ 54402		f		+ 51878	+ 58611
	g		+ 6010	+ 33256		g	]	+ 53084	+ 37468
	h		+ 12517	+15214		h		+ 59631	+ 19436
	l m		+ 39168 + 65984	+ 524 + 15742		O P		-42424 -31244	- 9409 + 10644
			T 03904	T *3/4*		P		-31344	+ 10044
			Nov. 10	н				Nov. 10	н
477 E.		6 38 36	<b> 63986</b>	+ 11994	501 W.		16 20 35	- 16410	+ 16394
	b		-63502	<b>-</b> 8544		Ъ		- 15936	- 4184
	c d		- 56229 - 36434	-33333 -11172		c d		- 8618	- 28969 - 6768
	•		-33000	+ 22156		•		+ 11144 + 14590	+ 26570
	f		+ 5266	+ 54398		f		+ 52812	+ 58795
	g h		+ 6505	+ 33248		g		+ 54043	+ 37666
	h 1		+ 13012	+ 15198		h		+ 60576	+ 19598
	m		+ 39684 + 66494	+ 524 + 15780		O P		-41464 -30412	- 9205 + 10824
	_		1 00494	7.3700		•		30412	7 10024
			Nov. 10	H				Nov. 28	н
478 E.	a	6 41 35	-63722	+ 12015	615 E.	a	5 56 54	-67062	- 1376
	b		-63258	- 8520		b		-51991	+ 13342
	ď		— 55968 — 36152	-33308 -11198		c d		- 17835	- 29696 - 25078
			-30152 $-32758$	+ 22195		e u		+ 2840 + 10181	+ 15018 - 56628
	f		+ 5500	+ 54398		ť		+ 22416	-61761
	g		+ 6750	+ 33238		g		+ 31457	-37499
	h l		+ 13255	+ 15205		h		+46236	- 1040
	m		+ 39922 + 66745	+ 508 + 15760		1 m		+ 39792 - 13128	+ 57032 + 71807
			T 00/43	7 - 3/00				13120	7 /100/
					لسببا				

TABLE V. — PARALLAX PLATE MEASURES — Continued.

-									
Plate No.	STAR.	P. S. T.	x	y	Plate No.	STAR.	P. S. T.	x	y
			1900					1900	
616 E.	a	5 59 54	Nov. 28 66956	C - 1182	621 E.		6 15 8	Nov. 28 66376	H - 105
010 L.	b	3 39 34	- 51903	+ 13546	021 15.	Ъ	0.13	-51345	+ 14613
	c		- 17736	- 29490		C		-17179	- 28389
	đ		+ 2953	+ 15222		đ		+ 3499	+ 16300
	•		+ 10260	- 56425		•		+ 10824	- 55310
	f		+ 22490	-61556		f		+ 23060	-60456
	g h		+ 31536 + 46343	- 37311		g h		+ 32091 + 46880	- 36207
	ī		+ 39916	- 839 + 57231		ī		+ 40436	+ 238 + 58289
	m		- 12984	+ 72035		m		-12464	+ 73117
			, ,						. , , ,
			Nov. 28	н				Nov. 28	С
617 E.		6 2 36	- 6688o	- 082	622 E.		6 17 47	- 66310	+ 64
,	b		-51792	+ 13740		b	· -, 4,	-51258	+ 14807
	C		- 17653	- 29303		c,		- 17104	- 28233
	đ		+ 3048	+ 15413		đ		+ 3593	+ 16494
			+ 10357	- 56247		•		+ 10899	-55153
	f		+ 22582	-61377		f		+ 23130	-60292
	g h		+ 31647 + 46457	- 37136 - 665		g h		+ 32174 + 46981	-36057 + 436
	ī		+ 40027	+ 57402		ī		+ 40545	+ 58500
ł	m		<b>- 12880</b>	+72214		m		- 12368	+ 73307
		•	Nov. 28	С				Nov. 28	н
618 E.	<b>a</b>	6 5 47	- 66740	<b>–</b> 766	623 E.		6 20 43	-66206	+ 272
	ъ		- 51685	+13942	_	b		-51143	+ 14995
	C		- 17534	- 29070		C		<b>–</b> 16991	- 28012
	d		+ 3160	+ 15637		d		+ 3696	+ 16685
	f		+ 10472	- 56009 - 67747		f		+ 11015	- 54939 - 50096
	g		+ 22706 + 31745	-61141 -36906		g		+ 23245 + 32295	- 60086 - 35838
	h		+ 46561	- 431		ĥ		+ 47095	+ 621
	1		+40102	+ 57650		1		+40634	+ 58683
	m		- 12796	+ 72454		m		- 12248	+73481
				İ					
. D			Nov. 28	H	_			Nov. 28	C
619 E.		6 8 36	<b>-66605</b>	- 586	624 E.	A	6 23 58	<b></b> 66090	+ 473
	b C		- 51587 - 17412	+ 14160 - 28861		b		- 51036 - 16876	+ 15227 - 27812
	ď		+ 3257	+ 15835		ď		+ 3809	+ 16931
l	•		+ 10593	-55774		•		+ 11144	-54712
ł	f		+ 22836	- 60924	ļ	f		+ 23391	- 59855
	g		+ 31870	- 36672		g		+ 32422	-35613
ŀ	h		+ 46659	- 221		h 1		+47217	+ 868
	m		+ 40197 12722	+ 57836 + 72626		m		+ 40751 - 12154	+ 58951 + 73742
	_		/	7 /2020				12134	T 13144
			Nov. 28	c				Nov. 28	н
620 E.	a	6 12 8	-66519	- 338	625 E.	a	6 26 47	-65996	+ 694
1	b		-51465	+ 14378		b	- 40	- 50917	+ 15438
	C		- 17287	- 28616		C		<b>–</b> 16791	- 27610
Ī	d		+ 3378	+ 16066		d		+ 3922	+ 17109
	f		+ 10711	-55553 -60677		f		+ 11219	- 54538 - 50650
	g		+ 22957 + 32000	- 60677 - 36438		g		+ 23466 + 32502	- 59672 - 35432
	h		+ 46793	+ 20		h		+ 47313	+ 1047
	1		+ 40337	+ 58086		1		+ 40874	+ 59106
Ī	m		- 12579	+ 72880		m		<b>- 12002</b>	+73928
	L			<u> </u>	1				

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE No.	Star.	P. S. T.	x	y	PLATE No.	Star.	P. S. T.	x	у
635 W.	a b c d e f g h n	14 4 I	1900 Nov. 28 - 49579 - 34471 - 3300 + 20302 + 27718 + 30969 + 48970 + 63711 - 15564 - 55353	C + 36133 + 50864 + 7847 + 52599 - 19083 - 24214 + 73 + 36574 - 31567 - 9217	644 W.	a b c d e f g h n	I4 44 0	1900 Nov. 28 - 48398 - 33302 + 853 + 21454 + 28887 + 41127 + 50154 + 64898 - 14390 - 54150	H + 39486 + 54217 + 11189 + 55889 - 15728 - 20875 + 3394 + 39860 - 28242 - 5860
637 W.	a b c d e f g h	14 10 0	Nov. 28 - 49369 - 34257 - 120 + 20510 + 27881 + 40128 + 49163 + 63962 - 15375 - 55225	C + 36642 + 51369 + 8325 + 53056 - 18588 - 23724 + 516 + 37017 - 31059 - 8741	647 W.	a b c d e f g h n	14 53 0	Nov. 28 - 48095 - 33037 + 1121 + 21703 + 29153 + 41388 + 50410 + 65167 - 14117 - 53856	C + 40205 + 54934 + 11918 + 56624 - 14986 - 20117 + 4112 + 40569 - 27466 - 5197
639 W.	a b c d e f g h	14 16 50	Nov. 28 - 49155 - 34060 + 75 + 20692 + 28118 + 40368 + 49380 + 64138 - 15195 - 54952	C + 37154 + 51936 + 8854 + 53636 - 17976 - 23126 + 1136 + 37629 - 30558 - 8246	648 E.	a b c d e f g h l	5 47 47	Nov. 29 - 80505 - 55526 - 54281 + 10738 + 16860 + 19598 + 29291 + 34654 + 5794 - 33962	H - 5639 - 36767 - 41514 + 14355 + 1826 - 62102 - 23007 - 14399 + 40434 + 62791
640 W.	a b c d e f g h	14 18 53	Nov. 28 - 49072 - 34013 + 121 + 20781 + 28142 + 40384 + 64223 - 15145 - 54875	H + 37388 + 52112 + 9078 + 53816 - 17829 - 22958 + 1287 + 37786 - 30286 - 7967	649 E.	a b c d e f g h 1 m	5 50 25	Nov. 29 - 80429 - 55468 - 54236 + 10796 + 16923 + 19608 + 29354 + 34717 + 5898 - 33832	C - 5415 - 36546 - 41319 + 14551 + 2021 - 61946 - 22862 - 14224 + 40628 + 62974
643 W.	a b c d e f g h n	14 41 0	Nov. 28 - 48436 - 33355 + 767 + 21409 + 28794 + 41036 + 50063 + 64861 - 14484 - 54256	C + 39228 + 53963 + 10923 + 55636 - 16015 - 21152 + 3107 + 39623 - 28486 - 6170	650 E.	a b c d e f g h l m	5 53 53	Nov. 29 - 80324 - 55373 - 54102 + 10933 + 17046 + 19726 + 29463 + 34835 + 6023 - 33719	H - 5147 - 36255 - 41055 + 14796 + 2261 - 61651 - 22592 - 13972 + 40871 + 63205

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE No.	STAR.	P. S. T.	x	y	PLATE No.	Star.	P. S. T.	x	y
651 E.	a b c d e f g h	5 56 25	1900 Nov. 29 - 80253 - 55304 - 54046 + 10997 + 17118 + 19786 + 29514 + 34900 + 6067 - 33648	C - 4950 - 36104 - 40876 + 14950 + 2423 - 61557 - 22434 - 13828 + 41030 + 63432	656 E.	a b c d e f g h l m	6 12 0	1900 Nov. 29 - 79756 - 54798 - 53547 + 11488 + 17606 + 20312 + 30046 + 35402 + 6562 - 33172	H - 3849 - 34978 - 39749 + 16107 + 3553 - 60382 - 21283 - 12659 + 42168 + 64547
652 E.	a b c d e f g h l	5 59 46	Nov. 29 - 80154 - 55187 - 53936 + 11110 + 17215 + 19923 + 29648 + 34994 + 6168 - 33547	H - 4726 - 35864 - 40630 + 15211 + 2660 - 61286 - 22191 - 13571 + 41303 + 63672	657 E.	a b c d e f g h l	6 14 47	Nov. 29 - 79657 - 54712 - 53465 + 11594 + 17706 + 20409 + 30124 + 35500 + 6657 - 33069	C - 3630 - 34764 - 39527 + 16310 + 3770 - 60162 - 21075 - 12451 + 42384 + 64769
<sub>.</sub> 653 E.	a b c d e f g h l m	6 2 53	Nov. 29 - 80057 - 55086 - 53818 + 11210 + 17334 + 20065 + 29761 + 35133 + 6272 - 33456	C - 4529 - 35683 - 40439 + 15435 + 2910 - 61056 - 21949 - 13325 + 41508 + 63863	658 E.	a b c d e f g h	6 17 36	Nov. 29 - 79562 - 54619 - 53358 + 11690 + 17802 + 20478 + 30215 + 35582 + 6755 - 32980	H - 3416 - 34543 - 39298 + 16534 + 3992 - 59953 - 20868 - 12229 + 42593 + 65008
654 E.	a b c d e f g h l m	660	Nov. 29 - 79923 - 54968 - 53726 + 11322 + 17432 + 20134 + 29850 + 35220 + 6382 - 33331	H - 4251 - 35400 - 40166 + 15674 + 3117 - 60835 - 21730 - 13113 + 41742 + 64135	668 W.	a b c d e f g h n	13 57 46	Nov. 29 - 64845 - 39852 - 38611 + 26396 + 32518 + 35256 + 44953 + 50320 - 25282 - 43738	C + 33357 + 2240 - 2546 + 53370 + 40816 - 23116 + 15991 + 24604 - 64955 - 56766
655 E.	a b c d e f g h 1 m	6 8 46	Nov. 29 - 79840 - 54892 - 53636 + 11407 + 17517 + 21998 + 29936 + 35302 + 6487 - 33243	C - 4064 -35198 -39957 +15875 + 3331 -60609 -21529 -12910 +41945 +64337	669 W.	a b c d e f g h n	14 0 36	Nov. 29 - 64761 - 39771 - 38543 + 26481 + 32607 + 35305 + 45057 + 50413 - 25217 - 43681	H + 33614 + 2493 - 2272 + 53612 + 41058 - 22880 + 16239 + 24853 - 64699 - 56482

TABLE V. -- PARALLAX PLATE MEASURES -- Continued.

PLATE No.	STAR.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	x	у
NO.			1900		No.			1900	
			Nov. 29	С			i	Nov. 29	H
670 W.		14 3 58	-64703	+ 33890	675 W.		14 19 53	-64268	+ 35249
	Ъ		<b>- 39680</b>	+ 2755	1	Ъ		<b>- 39280</b>	+ 4149
1	Ċ		- 38466	<b>–</b> 2018		Ç		- 38039	- 627
	d		+ 26522	+ 53870		d		+ 26957	+ 55247
	0		+ 32667	+41332		e f		+ 33075	+ 42701
1	f		+ 35434	- 22585				+ 35839	-21219
	g h		+ 45100 + 50467	+ 16500 + 25142		g h		+ 45525 + 50876	+ 17883 + 26492
	n		- 25116	- 64418		n		- 24717	-63041
	•		-43570	- 56255		•		-43146	- 5485I
	j		4557	3-23				40-4-	34-3-
			Nov. 29	н				Nov. 29	С
671 W.		14 6 46	- 64638	+ 34124	676 W.		14 22 54	-64172	+ 35529
	b		<b>-39637</b>	+ 2999	1 1	b		- 39211	+ 4420
	Ç		- 38402	- 1743		C		- 37958	- 356
i	d		+ 26616	+ 54138		đ		+ 27065	+ 55472
1	•		+ 32736	+41564		•		+ 33186	+42912
	f		+ 35476	- 22338	1	f		+ 35886	-21016
	g h		+ 45193	+ 16754		g h		+ 45610	+ 18107
ŀ	ם		+ 50544 - 25070	+ 25381 - 64168		n		+ 50972 - 24673	+ 26717 - 62790
	-		-43520	<b>- 55966</b>		ō		-43111	- 54595
	•		403-0	33900		•		43	34393
			Nov. 29	С				Nov. 29	н
672 W.		14 10 1	-64496	+ 34388	677 W.		14 26 8	-64105	+ 35805
į į	b		-39515	+ 3276		Ъ		<b>–</b> 39106	+ 4685
	C		-38257	- 1456		C		<b>–</b> 37891	- 76
l i	đ		+ 26707	+ 54350		đ	1	+ 27115	+ 55766
1	•		+ 32821	+41820		•		+ 33247	+ 43259
i	f	1	+ 35569	- 22076	i l	f		+ 35984	- 20703
i	g h	ļ	+ 45263	+ 17010	1	g h	1	+ 45688	+ 18394
	n .		+ 50615	+ 25609 - 63893		n	1	+ 51042	+ 27030
	0	1	- 24978 - 43433	- 55703		0		- 24572 - 43022	- 62492 - 54283
	•		70700	337-3		•		43000	34203
			Nov. 29	H				Nov. 29	H
673 W.		14 13 8	-64422	+ 34674	678 W.		14 29 1	-64020	+ 36066
	b		-39412	+ 3575		b		- 39029	+ 4961
	c d		- 38189	- 1186		c d		<b>-37801</b>	+ 173
			+ 26788	+ 54647				+ 27201	+ 56001
ŀ	f		+ 32917 + 35600	+ 42104 - 21833		f		+ 33318 + 36044	+ 43471 - 20439
	g		+ 45352	+ 17263		g		+ 45733	+ 18637
	ĥ		+ 50702	+ 25860		ĥ		+ 51109	+ 27262
	n		- 24902	-63618		n		- 24499	-62238
	0		-43337	-55411		0		-42938	- 54034
			Man					Dec	**
674 W.		74 76 76	Nov. 29	C		_		Dec. 5	H
U/4 W.	a b	14 16 36	- 64378 - 39361	+ 34970	713 E.	a b	5 44 0	- 35812 - 14670	-47175 -66244
	C		- 39301 - 38134	+ 3044 - 915		C	]	- 14076 - 2198	- 66344 - 5582
	ď	ĺ	+ 26875	+ 54957		ď		+ 3658	- 3502 - 27796
	ě		+ 32989	+ 42412		•		+ 13518	+ 6658
	ť		+ 35756	-21522		f		+ 21928	+ 37846
		}	+45438	+ 17578		g		+ 36488	-46404
	g h		+ 50785	+ 26203		ň		+ 63228	+2 954
	n		- 24808	- 63340		1	i	+ 23224	+ 74066
	0		-43259	-55148	∥ i	m		+ 51597	+ 46182
					<u> </u>				

TABLE V. -- PARALLAX PLATE MEASURES -- Continued.

PLATE No.	STAR.	P. S. T.	x	y	PLATE No.	Star.	P. S. T.	x	у
714 E.	a b c d e f g h I	5 46 43	1900 Dec. 5 - 35831 - 14688 - 2205 + 3639 + 13520 + 21905 + 36457 + 63204 + 23199 + 51549	H - 46997 - 66174 - 5355 - 27592 + 6842 + 38013 - 46188 + 1108 + 74220 + 46353	719 E.	a b c d e f g h l	6 I 25	1900 Dec. 5 -35770 -14612 - 2119 + 3738 + 13594 + 21972 + 36574 + 63280 + 23240 + 51612	C - 45717 - 64890 - 4064 - 26294 + 8109 + 39280 - 44884 + 2366 + 75500 + 47590
715 E.	a b c d e f g h 1 m	5 50 0	Dec. 5 - 35801 - 14662 - 2182 + 3677 + 13520 + 21904 + 36513 + 63208 + 23182 + 51561	C -46704 -65847 - 5051 -27280 + 7134 +38295 -45871 + 1384 +74493 +46629	720 E.	a b c d e f g h 1 m	6 4 53	Dec. 5 - 35739 - 14599 - 2102 + 3741 + 13593 + 21984 + 36564 + 63285 + 23270 + 51670	H -45400 -64572 - 3772 -25991 + 8394 +39576 -44608 + 2658 +75767 +47912
716 E.	a b c d e f g h l	5 53 0	Dec. \$ - 35814 - 14684 - 2169 + 3693 + 13535 + 21940 + 36493 + 63215 + 23249 + 51619	H - 46385 - 65569 - 4797 - 27025 + 7380 + 38542 - 45610 + 1616 + 74744 + 46865	721 E.	a b c d e f g h 1	6 8 8	Dec. \$ - 35731 - 14608 - 2092 + 3762 + 13622 + 22010 + 36588 + 63339 + 23287 + 51708	C -45122 -64303 - 3481 -25710 + 8713 + 39879 -44320 + 2965 + 76088 + 48202
717 E.	a b c d e f g h l	5 55 36	Dec. 5 - 35851 - 14714 - 2145 + 3666 + 13566 + 21965 + 36490 + 63243 + 23231 + 51618	C - 46285 - 65466 - 4581 - 26838 + 7604 + 38757 - 45440 + 1800 + 74939 + 47064	722 E.	a b c d e f g h l	6 10 54	Dec. 5 - 35699 - 14564 - 2077 + 3797 + 13641 + 22024 + 36596 + 63314 + 23303 + 51686	H - 44882 - 64053 - 3257 - 25480 + 8920 + 40102 - 44071 + 3172 + 76290 + 48446
718 E.	a b c d e f g h l m	5 58 25	Dec. 5 - 35776 - 14638 - 2134 + 3720 + 13567 + 21958 + 36552 + 63261 + 23198 + 51598	H - 45968 - 65147 - 4330 - 26550 + 7856 + 39008 - 45130 + 2112 + 75190 + 47343	723 E.	a b c d e f g h l m	6 14 8	Dec. 5 - 35734 - 14598 - 2666 + 3771 + 13668 + 22048 + 63363 + 23319 + 51721	C -44630 -63835 - 2972 -25216 + 9210 +40368 -43816 + 3450 + 76597 +48701

TABLE V. - PARALLAX PLATE MEASURES - Continued.

Plate No.	Star.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	у
733 W.	a b c d e f g h	13 21 1	1900 Dec. 5 - 33524 - 12361 + 67 + 5957 + 15778 + 24151 + 38779 + 65457 + 20371 + 43918	H - 4683 - 23852 + 36932 + 14754 + 49126 + 80293 - 3855 + 43390 - 43555 - 46512	738 W.	a b c d e f g h	13 35 36	1900 Dec. 5 - 33522 - 12378 + 64 + 5969 + 15775 + 24138 + 38776 + 65460 + 20346 + 43892	C - 3219 - 22411 + 38381 + 16194 + 50562 + 81729 - 2429 + 44861 - 42105 - 45066
734 W.	a b c d e f g h o	13 23 54	Dec. 5 - 33502 - 12374 + 58 + 5963 + 15778 + 24152 + 38794 + 65471 + 20366 + 43927	C - 4412 - 23586 + 37198 + 15027 + 49409 + 80582 - 3589 + 43720 - 43268 - 46218	739 W.	a b c d e f g h	13 39 8	Dec. 5 - 33528 - 12380 + 42 + 5955 + 15760 + 24095 + 38768 + 65439 + 20362 + 43905	H - 2911 - 22077 + 38695 + 16539 + 50917 + 82069 - 2050 + 45209 - 41774 - 44724
735 W.	a b c d e f g h o	13 27 1	Dec. 5 - 33504 - 12369 + 69 + 5959 + 15780 + 24135 + 38760 + 65450 + 20368 + 43904	H - 4086 - 23265 + 37524 + 15329 + 49722 + 80854 - 3269 + 43994 - 42948 - 45895	740 W.	a b c d e f g h	13 42 0	Dec. 5 - 33540 - 12391 + 81 + 5974 + 15782 + 24160 + 38778 + 65454 + 20323 + 43872	C - 2619 - 21807 + 39010 + 16812 + 51191 + 82341 - 1805 + 45442 - 41513 - 44452
736 <b>W</b> .	a b c d e f g h o p	13 30 1	Dec. 5 - 33502 - 12340 + 47 + 5947 + 15793 + 24153 + 38777 + 65490 + 20375 + 43919	C - 3802 - 22975 + 37816 + 15624 + 50062 + 81218 - 2966 + 44379 - 42668 - 45607	741 W.	a b c d e f g h o	13 45 8	Dec. 5 - 33519 - 12364 + 22 + 5935 + 15749 + 24125 + 38740 + 65419 + 20350 + 43879	C - 2326 - 21498 + 39303 + 17105 + 51494 + 82646 - 1482 + 45771 - 41171
737 <b>W</b> .	a b c d e f g h o	13 32 36	Dec. 5 - 33538 - 12387 + 28 + 5940 + 15753 + 24122 + 38758 + 65425 + 20347 + 43896	H - 3544 - 22735 + 38062 + 15870 + 50267 + 81399 - 2725 + 44518 - 42417 - 45362	742 W.	a b c d e f g h o	13 47 54	Dec. 5 - 33562 - 12391 + 8 + 5922 + 15730 + 24090 + 38746 + 65404 + 20338 + 43866	H - 2032 - 21200 + 39587 + 17399 + 51797 + 82929 - 1188 + 46064 - 40905 - 43838

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	y
743 W.	a b c d e f g h o p	13 51 0	1900 Dec. 5 -33538 -12423 + 58 + 5949 +15786 +24162 +38757 +65451 +20314 +43866	C - 1705 - 20900 + 39885 + 17689 + 52075 + 83215 - 920 + 46325 - 40603 - 43572	748 E.	a b c d e f g h l m	5 52 36	1900 Dec. 6 -41444 -39721 -10601 - 5829 +25460 +32002 +36050 +43725 +11677 +35249	C -47401 -24595 -39316 -20352 -63799 +17532 -62819 -40260 +47476 +44508
744 E.	a b c d e f g h l m	5 4I O	Dec. 6 -41428 -39710 -10602 -5834 +25462 +31984 +36049 +43718 +11683 +35256	H - 48430 - 25616 - 40339 - 21374 - 64832 + 16485 - 63847 - 41306 + 46399 + 43474	749 E.	a b c d e f g h l m	5 55 43	Dec. 6 -41428 -39687 -10575 -5819 +25479 +32021 +36070 +43722 +11708 +35286	H - 47085 - 24278 - 39017 - 20053 - 63492 + 17789 - 62512 - 39991 + 47700 + 44783
745 E.	a b c d e f g h l	5 <b>43</b> 51	Dec. 6 -41444 -39737 -10607 -5862 +25480 +31999 +36082 +43724 +11659 +35227	C -48253 -25432 -40154 -21168 -64598 +16786 -63601 -41050 +46678 +43763	750 E.	a b c d e f g h l	5 59 8	Dec. 6 -41427 -39703 -10593 -5825 +25489 +32014 +36064 +43740 +11693 +35265	C - 46812 - 23987 - 38713 - 19753 - 63190 + 18109 - 62215 - 39684 + 48005 + 45079
746 E.	a b c d e f g h l	5 46 54	Dec. 6 -41444 -39708 -10602 - 5828 +25467 +32002 +36060 +43716 +11685 +35261	C - 47880 - 25060 - 39798 - 20843 - 64278 + 17017 - 63289 - 40773 + 46940 + 44006	751 E.	a b c d e f g h l	620	Dec. 6 -41428 -39703 -10594 -5813 +25473 +32009 +36069 +43735 +11701 +35262	H - 46544 - 23748 - 38455 - 19497 - 62936 + 18349 - 61955 - 39415 + 48257 + 45343
747 E.	a b c d e f g h 1 m	5 49 36	Dec. 6 -41444 -39729 -10627 - 5848 +25457 +32037 +36050 +43710 +11715 +35277	H - 47695 - 24879 - 39602 - 20639 - 64108 + 17251 - 63105 - 40547 + 47166 + 44252	752 E.	a b c d e f g h l m	6 5 6	Dec. 6 -41404 -39681 -10566 -5808 +25518 +32023 +36116 +43763 +11686 +35256	C -46308 -23493 -38216 -19243 -62664 +18666 -61664 -39127 +48566 +45666

### PARALLAX PLATE MEASURES

TABLE V. - PARALLAX PLATE MEASURES - Continued.

PLATE	0	200			PLATE	0	200		
No.	Star.	P. S. T.	<b>x</b>	y	No.	STAR.	P. S. T.	<b>x</b>	у
			1900 Dec. 6	н				1900 Dec. 6	С
753 E.		680	-41442	-46027	767 W.		13 24 6	-41363	- 4503
	ъ		-39701	- 23215		Ъ		-39650	+ 18342
	Ç		<b>–</b> 10578	-37930		c d		- 10529	+ 3612
	d e	İ	- 5821 +25475	- 18973 - 62407		•		- 5776 + 25561	+ 22583 - 20816
	f		+ 32008	+ 18864		f		+ 32017	+ 60526
	g		+ 36069	-61419		g		+ 36176	- 19827
	h		+43728	<b>- 38891</b>		h		+ 43780	+ 2745
	l m		+ 11680	+ 48777 + 45864		O P		+ 47043 - 10264	-21398
			+ 35243	7 43004		P		10204	-35277
			Dec. 6	С				Dec. 6	н
754 E.		6 11 0	-41390	-45784	768 W.	8	13 27 6	-41384	- 4166
	b		— 39670 — 10568	- 22954 - 37688		b		— 39660 — 10549	+ 18651 + 3936
	ď		<b>-</b> 5797	- 18731		ď		<b>-</b> 5780	+ 22908
	•		+ 25527	-62147		•	•	+ 25535	- 20502
	f		+ 32017	+ 19172		f		+ 31998	+ 60798
	g		+ 36117	-61139 -38617		g h	1	+ 36154	- 19513
	ī		+43774 +11683	+ 49075		0		+ 43753 + 47040	+ 3040 - 21102
	m		+ 35250	+46161		P		- 10293	-34966
			Dec. 6	H				Dec. 6	С
764 W.		13 14 36	-41319	- 5408	769 W.		13 30 0	-41404	- 3903
	b		- 39586 - 10474	+ 17439 + 2684		b		— 39684 — 10576	+ 18948 + 4200
	ď		- 5704	+ 21641		ď	1	- 5812	+ 23192
ł	•		+ 25596	- 21785		•	ł	+ 25524	- 20230
	f		+ 32128	+ 59535		f		+ 31962	+ 61088
	g h		+ 36201 + 43834	- 20807 + 1753		g h	j i	+ 36144 + 43744	- 19238 + 3326
	0	}	+ 47074	- 22400		0		+47009	- 20818
	P		- 10220	-36214		P		- 10306	-34677
			Dec. 6	С				Dec. 6	н
765 W.		13 18 0	-41337	- 5073	770 W.		13 32 36	-41428	- 3622
	ъ		- 39604	+ 17761		ъ		- 39692	+ 19233
	C		- 10504	+ 3008		c d		<b>– 10585</b>	+ 4475
	d •		- 5735 + 25579	+ 21980 - 21454		<b>a</b>		- 5810 + 25491	+ 23444 - 19975
	ď		+ 32076	+ 59868		f		+ 31977	+ 61324
	g		+ 36199	- 20476	li i	g		+ 36105	- 18993
	h	1	+ 43822	+ 2077		h	1	+43724	+ 3549
	P		+ 47077 - 10252	- 22048 - 35882		O P		+ 46945 - 10379	- 20561 - 34430
			20232	33002				3/9	3443
			Dec. 6	H				Dec. 6	С
766 W.	a b	13 21 15	-41347 -20611	- 4754 - 1808a	771 W.	a b	13 36 12	-41444 -20720	- 327I
	C		— 39611 — 10516	+ 18082 + 3343		C		- 39729 - 10601	+ 19583 + 4838
	ď		- 5746	+ 22311		d		- 5836	+ 23825
	•		+ 25554	-21117		•		+ 25463	- 19626
	f	]	+ 32055	+ 60199		f		+ 31972	+ 61715
	g h		+ 36182 + 43787	- 20150 + 2425		g h	j	+ 36099 + 43710	- 18641 + 3939
	ō	]	+ 47058	-21714		0		+ 46959	T 3939
	P		- 10265	-35547		P		- 10365	- 34075
							L		

TABLE V. -- PARALLAX PLATE MEASURES -- Continued.

PLATE No.	STAR.	P. S. T.	x	у	PLATE No.	Star.	P. S. T.	x	y
772 W.	a b c d e f g h o p	13 38 53	1900 Dec. 6 -41448 -39703 -10615 -5845 +25446 +31933 +36054 +43690 +46923 -10392	H - 2981 + 19881 + 5108 + 24103 - 19364 + 61957 - 18361 + 4194 - 19937 - 33775	777 E.	a b c d e f g h l m	5 48 47	1900 Dec. 7 - 19980 - 15764 - 11553 - 2589 - 1628 + 11498 + 21743 + 60660 + 12149 + 22756	C -62232 -32934 -46966 -32914 -28740 +7720 -18554 -26334 +71085 +72024
773 W.	a b c d e f g h	13 42 8	Dec. 6 -41479 -39733 -10646 -5891 +25411 +31909 +36038 +43686 +46895 -10393	C - 2675 + 20202 + 5439 + 24424 - 19024 + 62338 - 18028 + 4548 - 19616 - 33498	778 E.	a b c d e f g h l m	5 51 36	Dec. 7 - 20039 - 15794 - 11610 - 2637 - 1663 + 11476 + 21702 + 60620 + 12178 + 22766	H - 62012 - 32690 - 46743 - 32659 - 28518 + 7966 - 18310 - 26129 + 71338 + 72288
774 W.	a b c d e f g h	13 45 8	Dec. 6 - 41506 - 39771 - 10670 - 5902 + 25422 + 31910 + 36017 + 43660 + 46902 - 10424	H - 2377 + 20500 + 5718 + 24713 - 18743 + 62614 - 17762 + 4817 - 19364 - 33195	779 E.	a b c d e t g h l m	5 54 36	Dec. 7 - 20063 - 15828 - 11633 - 2654 - 1691 + 11457 + 21682 + 60589 + 12148 + 22750	C -61736 -32408 -46469 -32390 -28234 +8241 -18024 -25837 +71595 +72532
775 E.	a b c d e f g h	5 42 43	Dec. 7 - 19962 - 15735 - 11533 - 2565 - 1607 + 11531 + 21757 + 60691 + 12217 + 22815	C - 62798 - 33463 - 47512 - 33441 - 29262 + 7170 - 19083 - 26875 + 70556 + 71512	780 E.	a b c d e f g h l m	5 59 8	Dec. 7 - 20090 - 15829 - 11644 - 2667 - 1698 + 11461 + 21658 + 60589 + 12151 + 22737	H - 61285 - 31989 - 46005 - 31954 - 27791 + 8651 - 17609 - 25420 + 72021 + 72972
776 E.	a b c d e f g h l m	5 46 0	Dec. 7 - 19991 - 15756 - 11564 - 2592 - 1619 + 11504 + 21722 + 60656 + 12196 + 22789	H - 62505 - 33182 - 47231 - 33156 - 28994 + 7467 - 18800 - 26606 + 70853 + 71793	781 E.	a b c d e f g h l m	6 r 53	Dec. 7 - 20071 - 15829 - 11635 - 2667 - 1699 + 11424 + 21652 + 60569 + 12085 + 22666	C -61075 -31759 -45798 -31726 -27547 + 8902 -17362 -25159 +72263 +73206

## PARALLAX PLATE MEASURES

TABLE V. - PARALLAX PLATE MEASURES - Continued.

							<del></del>		
Plate No.	STAR.	P. S. T.	x	y	PLATE No.	STAR.	P. S. T.	x	y
			1900					1900	
782 E.		ا میما	Dec. 7	H	W			Dec. 7	C
702 E.	a b	6 4 46	- 20097 - 15854	- 60785 - 31491	797 W.	a b	13 7 8	- 21885 - 17711	- 19965 + 9416
	c		- 11666	-45544		c	i	- 13498	<del>-</del> 4670
	đ		- 2698	-31461		d		- 4537	+ 9432
	•		- 1710	- 27294		•		- 3563	+ 13603
	f		+ 11431	+ 9166		f		+ 9542	+ 50091
	g h		+ 21640	- 17097		g		+ 19778	+ 23824
	ī		+ 60560 + 12124	- 24894 + 72538		h		+ 58715 + 70797	+ 16023 - 23600
	m		+ 22707	+ 73480		P		+ 38071	-35224
						•			
			Dec. 7	С				Dec. 7	н
783 E.		6 7 54	- 20112	-60508	798 W.		13 10 8	- 21939	- 19639
	b	' '	<b>– 15871</b>	-31186	,,,	b	-3	- 17751	+ 9737
	C	ļ	- 11676	-45230		C		-13531	- 4350
	d		<b>– 2699</b>	-31170		d		- 4564	+ 9754
	f		- 1729 - 17427	- 27008		f		- 3590	+ 13899
	g		+ 11427 + 21642	+ 9450 - 16807		g		+ 9528 + 19752	+ 50371 + 24118
	h		+ 60544	- 24622		ĥ		+ 58693	+ 16328
	1		+12119	+ 72797		0		+ 70733	- 23270
	m		+ 22712	+ 73752		P		+ 37984	<b>-34901</b>
			Dec. 7	С			i	Dec. 7	С
784 E.		6 11 8	- 20082	-60205	799 W.		13 12 46	- 21967	- 19384
	ь	Į l	-15852	- 30912		b		- 17774	+ 9982
	c d	i I	11662 2693	- 44945 - 30876		c d		- 13562 - 4600	- 4104 + 10007
	•		- 1732	- 30570 - 2672I		•		- 3626	+ 14150
	f		+ 11402	+ 9753		Í		+ 9450	+ 50638
	g h		+ 21626	- 16509		g		+ 19716	+ 24389
		1	+ 60554	- 24301		h		+ 58631	+ 16598
•	l m		+ 12068 + 22648	+ 73111		O D		+ 70707	- 22992
			T 22040	+ 74063		P	į	+ 37987	- 34630
			Dec. 7	н				Dec. 7	н
785 E.		6 14 0	- 20108	- 59964	800 W.		13 16 5	- 21984	- 19019
	b		-15874	<b>- 30657</b>		ъ		- 17797	+ 10338
	C	1	- 11668	-44703		C		- 13582	- 3746
	d •		- 2715 - 1756	- 30624 - 26474		đ		- 4615 - 3640	+ 10357
	Í		+ 11405	+ 10017		f		+ 9465	+ 14516
	g		+ 21606	- 16290		g		+ 19702	+ 24724
	h		+ 60516	- 24059		h		+ 58621	+ 16926
	1		+ 12074	+ 73389		0		+ 70676	- 22693
	m		+ 22664	+ 74320		P		+ 37939	- 34300
<b>f</b>			Dec. 7	н				Dec. 7	С
796 W.		13 4 11	- 21880	- 20226	801 W.		13 19 5	- 22020	- 18717
	b		- 17693	+ 9130		b		- 17840	+ 10671
	C		<b>–</b> 13480	- 4929		c		- 13628	- 3427
	d		- 4502 - 3545	+ 9166		d		- 4661 - 6601	+ 10658
	f		- 3545 + 9564	+ 13299		e f		- 3694 + 9416	+ 14832
	g		+ 9504	+ 49774 + 23506		g		+ 9410	+ 51332 + 25032
	h		+ 58735	+ 15724		ĥ		+ 58604	+ 17200
	0		+ 70780	- 23879		0		+ 70621	- 22382
	P		+ 38064	<b>-35491</b>		P		+ 37906	- 34005
	L			<u></u>	L		L		

TABLE V. — PARALLAX PLATE MEASURES — Continued.

PLATE No.	Star.	P. S. T.	x	y	PLATE No.	Star.	P. S. T.	x	у
802 W.	a b c d e f g h o p	13 21 50	1900 Dec. 7 - 22074 - 17861 - 13654 - 4692 - 3721 + 9401 + 19640 + 58553 + 70587 + 37867	H - 18421 + 10939 - 3142 + 10945 + 15101 + 51580 + 25313 + 17474 - 22120 - 33727	806 W.	a b c d e f g h o p	13 34 10	1900 Dec. 7 - 22233 - 18003 - 13799 - 4803 - 3839 + 9241 + 19498 + 58427 + 70478 + 37768	H - 17198 + 12167 - 1892 + 12193 + 16342 + 52842 + 26563 + 18743 - 20809 - 32442
803 W.	a b c d e f g h o p	13 25 5	Dec. 7 - 22074 - 17892 - 13693 - 4711 - 3738 + 9364 + 19603 + 58504 + 70552 + 37835	C - 18107 + 11241 - 2814 + 11264 + 15425 + 51901 + 25634 + 17829 - 21771 - 33371	895 E.	a b c d e f g h i j l m	5 47 25	Dec. 24 -39858 -20551 -21934 -18607 +13838 +21166 +23320 +24588 +52431 + 1614 -14556 -35701	C + 3098 -71579 -26632 +22233 -51904 -59820 -64995 +13464 -16325 -26864 +48040 +35458
804 W.	a b c d e f g h o p	13 28 0	Dec. 7 - 22097 - 17923 - 13701 - 4739 - 3781 + 9312 + 19573 + 58498 + 70532 + 37815	H - 17804 + 11553 - 2524 + 11570 + 15742 + 52201 + 25932 + 18132 - 21456 - 33087	896 E.	a b c d e f g h i j l m	5 51 12	Dec. 24 - 40170 - 20829 - 22227 - 18918 + 13536 + 20866 + 23022 + 24250 + 52124 + 1306 - 14878 - 36038	H + 3490 -71127 -26220 +22606 -51487 -59392 -64543 +13874 -15868 -26460 +48426 +35832
805 W.	a b c d e f g h o p	13 31 5	Dec. 7 - 22142 - 17957 - 13741 - 4793 - 3817 + 9268 + 19522 + 58454 + 70493 + 37791	C -17492 +11864 - 2218 +11891 +16033 +52495 +26248 +18464 -21122 -32743	897 E.	a b c d e f g h i j l m	5 53 25	Dec. 24 - 40378 - 20976 - 22409 - 19122 + 13388 + 20720 + 22885 + 24035 + 51945 + 1132 - 15102 - 36262	C + 3689 - 70892 - 26003 + 22833 - 51244 - 59132 - 64308 + 14130 - 15613 - 26197 + 48628 + 36014

#### PARALLAX PLATE MEASURES

TABLE V. — PARALLAX PLATE MEASURES — Continued.

		<u> </u>					T		
Plate No.	STAR.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	у
898 E.	a b c d e f g h i j m	5 56 46	1900 Dec. 24 - 40666 - 21270 - 22705 - 19433 + 13089 + 20414 + 22575 + 23762 + 51655 + 825 - 15376 - 36538	H + 4080 - 70532 - 25625 + 23205 - 50869 - 58789 - 63942 + 14478 - 15256 - 25847 + 49014 + 36419	908 W.	a b c d e f g h i j o p	12 35 0	1900 Dec. 24 - 74702 - 55309 - 56767 - 53484 - 20998 - 13661 - 11469 - 10340 + 17521 - 33248 + 14243 + 25195	H + 48382 - 26212 + 18698 + 67505 - 6558 - 14472 - 19653 + 58797 + 29091 + 18467 - 68714 - 41012
899 E.	a b c d e f g h i j l m	5 59 54	Dec. 24 -40928 -21556 -22980 -19669 +12807 +20154 +22310 +23513 +51373 +578 -15634 -36805	C + 4403 - 70207 - 25300 + 23543 - 50555 - 58466 - 63654 + 14822 - 14934 - 25528 + 49349 + 36741	909 W.	a b c d e f g h i j o p		Dec. 24 - 74968 - 55578 - 57023 - 53735 - 21275 - 13932 - 11751 - 10618 + 17249 - 33514 + 13958 + 24880	C + 48740 - 25824 + 19064 + 67862 - 6198 - 14106 - 19287 + 59120 + 29411 + 18823 - 68378 - 40668
900 E.	a b c d e f g h i j l m	6 3 15	Dec. 24 - 41196 - 21822 - 23259 - 19956 + 12527 + 19879 + 22036 + 23235 + 51121 + 313 - 15898 - 37071	H + 4757 -69845 -24940 +23893 -50178 -58084 -63276 +15181 -14577 -25147 +49691 +37082	910 <b>W</b> .	a b c d e f g h i j o p	12 40 36	Dec. 24 - 75174 - 55826 - 57233 - 53970 - 21501 - 14188 - 11956 - 10816 + 17019 - 33738 + 13698 + 24623	H + 49057 - 25528 + 19388 + 68163 - 5893 - 13820 - 19032 + 59371 + 29692 + 19156 - 68040 - 40337
901 E.	ab c d o t shi ju m	6 5 58	Dec. 24 -41416 -22084 -23472 -20160 +12276 +19622 +21770 +23028 +50881 +63 -16094 -37254	C + 5060 - 69554 - 24641 + 24186 - 49910 - 57834 - 63017 + 15449 - 14332 - 24880 + 49990 + 37400	911 W.	a b c d e f g h i j o p	12 44 47	Dec. 24 - 75573 - 56224 - 57653 - 54340 - 21886 - 14549 - 12381 - 11215 + 16652 - 34129 + 13329 + 24255	C + 49542 - 25055 + 19844 + 68668 - 5410 - 13337 - 18548 + 59923 + 30195 + 19610 - 67594 - 39910

F

TABLE V.—PARALLAX PLATE MEASURES—Continued.

PLATE No.	Star.	P. S. T.	x	у	PLATE No.	STAR.	P. S. T.	x	у
912 W.	a b	12 48 11	1900 Dec. 24 - 75902 - 56512	H + 49895 - 24679	914 W.	a b	12 54 11	1900 Dec. 24 - 76476 - 57068	H + 50602 - 23972
	c d e f g h		- 57961 - 54688 - 22206 - 14862 - 12689 - 11581	+ 20214 + 69025 - 5026 - 12944 - 18147 + 60352		c d e f g h		- 58514 - 55256 - 22748 - 15433 - 13242 - 12094	+ 20914 + 69722 - 4325 - 12238 - 17439 + 60989
	i j o P		+ 16315 - 34448 + 13056 + 23963	+ 30590 + 19976 - 67193 - 39468		i j o P		+ 15770 - 35006 + 12486 + 23404	+ 31280 + 20687 - 66492 - 38791
913 W.	a b c d e f g h i j o P	12 51 8	Dec. 24 - 76155 - 56770 - 58217 - 54937 - 22465 - 15122 - 12942 - 11837 + 16053 - 34704 + 12761 + 23674	+ 50245 - 24330 + 20573 + 69358 - 4675 - 12599 - 17762 + 60717 + 30919 + 20333 - 66866 - 39136					

### PARALLAX PLATE CONSTANTS

TABLE VI. - PARALLAX PLATE CONSTANTS.

		PLATE C	ONSTANTS.	Standard	CONSTANTS.	Rep	ACTION CONST	ants.
DATE.	PLATE No.	Þ	r	Þ	r	M <sub>z</sub>	My, Nz	N,
Oct. 6 E.	92 93 94 95 96	000304 + 87 - 438 + 449 + 209	+.000067 + 146 + 241 - 124 - 336 I	+.000071 + 14	+.000564 + 643	+.000769 752 738 693 680	000211 201 191 162 153	+.000329 323 318 303 298
w.	104 105 106 107 108	+ 30 - 23 + 15 + 446 - 446	- 276 + 451 + 11 + 462 - 644 II	000063 206	+.001160 + 1111	352 360 368 382 386	- 2 0 + 2 6 7	247   
Oct. 12 E.	134 135 136 137 138 139	+ 33 - 189 + 66 + 68 + 148 + 256 - 367	- 448 - 661 - 326 + 730 - 63 + 344 + 440 II	+.000111 - 184	+.000646 + 519	486 514 551 616 653 736 773	- 39 54 74 115 137 188 208	251 258 267 284 294 315 326
W.	145 146 147 148	+ 115 + 253 - 312 - 70	+ 170 + 117 + 60 - 346 II	000433 - 260	+.000854 + 983	389 396 410 421	+ 2 4 8 12	246 " 247
Oct. 13 E.	150 151 152 153	- 618 + 568 + 125 - 86	- 345 + 91 - 3 + 249 I	001840 - 1533	002722 - 3078	994 968 949 866	- 382 338 310 275	440 426 415 367
w.	163 164 165 166 167 168 169	- 532 - 110 - 627 + 118 + 295 + 336 + 487	+ 266 + 107 - 71 - 95 - 175 - 241 + 210	—.001376 — 1192	003080 - 2800	408 412 420 437 443 460 466	+ 7 9 12 19 21 27 29	245 245 246 247 247 248 249
Oct. 14 E.	170 171 172 173 174 175 176 177	+ 197 + 276 + 29 + 68 - 412 - 133 + 195 - 64 000157	- 153 - 385 + 699 + 111 + 199 - 135 - 343 0 .000000	000330 - 913	coc61 + 17	861 847 828 765 751 708 694 649 +.000634	- 274 264 250 206 197 167 157 126000115	365 360 353 329 323 307 302 284 +.000278

TABLE VI.—PARALLAX PLATE CONSTANTS—Continued.

DATE.	PLATE	Pı	ATE C	ONSTAN	ITS.	STANDARD	Constants.	Reye	ACTION CONST	ANTS.
DATE.	No.	p	•		<i>r</i>	Þ	r	M <sub>z</sub>	My, Nz	Ny
Oct. 14 W.	187 188 189 190 191 192 193	 - + + - +	255 48 262 306 255 9	o - + - + +	301 301 3221 171 81 368 I	000714 - 1085	000379 - 386	+.000400 406 416 438 444 460 467	+.000004 6 10 18 20 26 28	+.000245 245 246 247 247 248 248
Oct. 15 E.	195 196 197 198 199 201 202	+ + + + -	203 3 76 296 59 147 39	+++	279 167 286 836 458 205 14 I	000648 - 765	000II4 - 20	830 809 761 747 715 667 652	- 249 234 201 192 169 135 125	349 341 323 318 306 288 282
w.	213 214 215 216*{ 217*{ 218*{ 219 220 221	+ + + + + + +	52 154 161 333 326 375 344 729 474 338 325 284	-+-++++	1008 658 902 2472 2521 2309 2312 2967 3110 258 856 140	000044 - 45	000947 - 976	408 414 420 441 446 462 470 485 491	+ 5 7 9 17 19 25 28 34 36	246 246 247 248 248 249 250 251
Oct. 16 E.	222 223 224 225 226 227 228 230	++++	283 97 138 401 224 281 279 135	+ - + + + - + -	204 682 637 31 577 836 466 374 I	+.000076 - 222	+.002436 + 2646	866 846 822 781 758 724 710 657	- 276 262 245 216 200 176 166 128	365 357 347 331 322 309 304 282
w.	239 240 241 242 243 244	- - + - +.∞	50 171 48 195 322 0406	+ - + - 0	114 72 259 174 29 00181 I	000503 - 877	+.002124 + 2406	443 452 464 478 485 +.000499	+ 17 21 26 32 35 +.000041	245 246 247 248 249 +.000250

<sup>\*</sup> Indicates that plates were reduced direct and not through the standard.

TABLE VI. — PARALLAX PLATE CONSTANTS — Continued.

D	PLATE	1	PLATE C	ONSTAN	ITS.	Standard	Constants.	Reyr	ACTION CONST	TANTS.
DATE.	No.		p		7	Þ	7	M <sub>z</sub>	My, Nz	N,
Oct. 21 E.	247	_	39	_	334			+.000786	000212	+.000326
	248	+	122	+	316			775	204	322
1	250	_	20 68	+	199			719	166	302
	251 252	_	107	_	221 283			694 679	149 138	294 289
1	253	_	30	+	235			647	116	278
1	254	+	100	+	105			634	108	273
			-		I	000100	+.000554			
					II	- 67	+ 585			Ì
w.	264	+	19	+	26			475	+ 23	248
	265	+	450	_	328			483	27	249
	266	-	16	-	92			491	31	250
	267	+	34	+	71			514	42	253
	268 260	+	204 346	++	10 147			520	45	254 257
1	270	_	197	+	34			543 550	55 59	258
	271	_	174	+	147			568	68	260
	·				II	000057 - 59	000242 - 252			
Oct. 24 E.	275	_	6	+	262			708	- 147	296
	276	_	29	_	233			698	139	293
	277	+	176	-	32			687	131	290
1	278	-	118	+	19			656	111	280
					II	+.000099 + 266	002253 - 2211			
w.	291	_	313	-	277			485	+ 25	248
	292	-	36	+	104			494	29	250
	293	+	42		278			504	33	251
	294 295	+	63 227	+	39 30			532 541	47 51	256 257
	296 296	+	188	+	270			568	62	261
	297	_	126	+	246	'		577	66	263
	298	+	66	-	39			600	76	267
					II	000892 - 715	003314 - 3189			
Oct. 26 E.	319	_	75	-	157			719	- 155	298
	320	-	100	+	495			708	148	295
1	321	+	137	+	267			699	143	293
	322	+	111	_	111			675 663	130	286 283
	323 324	<del> </del>	8	+	191 213			642	123	277
	325	_	19		86			631	102	274
	326	+	251	+	99			606	86	267
1	327	-	236	-	480			593	75	264
					II	000579 - 700	001986 - 2255			
w.	336	_	122	+	180			549	+ 49	257
	337	-	115	+	370			559	55	259
1	338	-	13	_	273			569	61	261
	339	-	16	-	240			594	76	266
	340		266 582	+	99			604 629	82	268
	341 342	+	583 39	_	310 40			639	96	274 276
	343	+	39 88	_	36			666	117	282
	344		00148	+.0	200242			+.000677	+.000122	+.000284
			•		II	+.000027 - 392	002976 - 3326			

TABLE VI. — PARALLAX PLATE CONSTANTS — Continued.

	PLATE	P	LATE C	ONSTAN	ITS.	STANDARD	CONSTANTS.	Rese	ACTEON CONST	ANTS.
DATE.	No.		þ		•	þ	•	М,	$M_y$ , $N_x$	Ny
Oct. 29 E.	345 346 347 348 349 350 351	+.00 + - - + - +	217 263 69 279 180 18	+.0	000340 971 1044 782 1229 1438 1257 I	000022 - 219	+.000864 + 1016	+.000648 642 635 620 613 598 592	000116 111 105 91 84 71 65	+.000286 284 281 276 273 268 266
w.	357 358 359	+ + -	4 36 50	+ - +	397 1248 838 I II	+.000199 - 27	000373 - 197	655 668 680	+ 103 110 118	279 282 286
Nov. 3 E.	396 397 398 399 400 401 402 404	+-+	117 19 205 241 309 39 198 94	+++	516 660 329 256 210 277 199 312 I	000024 + 115	+.002442 + 2803	619 610 601 583 571 553 544 516	- 90 85 80 71 64 55 50 34	264 263 261 258 256 253 252 247
w.	417 419 420 421 422 423 424 425 426	-++-++-+	92 87 158 229 174 21 50 221 45	+++++	23 273 184 394 138 271 148 298 267	000511 - 460	+.000423 + 908	751 781 806 826 851 866 891 906 921	+ 179 203 224 240 261 273 294 306 318	307 322 334 344 357 364 377 384 393
Nov. 10 E.	472 473 474 475 476 477 478	-+-+-+	237 208 256 147 153 47 234	+++	153 356 110 318 15 39 7 II	00043I - 722	003298 - 3472	531 524 517 499 492 475 470	- 39 36 33 25 23 16	250 250 250 248 248 246 245
w.	495 496 498 501	+0	86 143 272 00226	+ +.0	127 235 106 000011 II	000535 - 743	005173 - 5356	679 696 730 +.000786	+ 126 139 166 +.000212	281 288 303 +.000328

TABLE VI. — PARALLAX PLATE CONSTANTS — Continued.

D	PLATE	PLATE C	Constants.	Standard	Constants.	Rese	ACTION COMBI	ANTS.
DATE.	No.	Þ	7	Þ	r	M:	My, Nz	Ny
Nov. 28 E.	615 616 617 618 619 620 621 622 623 624 625	000112 - 57 - 235 - 7 + 172 + 275 + 8 + 72 - 65 - 57	+.000031 - 116 - 283 - 131 + 160 + 199 + 71 - 39 + 3 + 273 - 151		1	+.000374 370 366 361 357 351 347 345 340 336 335	+.000009 10 11 12 12 13 14 14 15 16	+.000247 " 248 " 249 250
w.	635 637 639 640 643 644 647	- 108 - 63 + 93 + 77 - 124 - 83 + 193	+ 270 - 337 + 454 - 235 - 281 + 50 + 80			654 682 715 724 827 841 883	+ 116 136 159 165 240 250 280	282 292 305 309 349 355 372
Nov. 29 E.	648 649 650 651 652 653 654 655 656	+ 13 + 17 + 97 - 6 - 24 - 273 + 30 + 106 - 24 - 10 + 69	+ 611 + 93 - 41 - 378 - 125 + 372 - 241 - 193 + 84 - 31 - 105			380 377 371 368 363 359 355 351 347 343 338	+ 7 7 8 9 10 11 12 13 14 15	247 " 248 " " 249 " "
w.	668 669 670 671 672 673 674 675 676 677	- 124 - 79 - 84 - 218 + 410 + 318 - 173 - 48 - 70 - 99 + 188	+ 227 + 27 + 316 + 181 - 6 - 348 + 145 + 192 - 465 - 18 - 264			646 659 672 685 698 711 728 741 754 767 +.000779	114 123 131 140 149 156 168 177 185 194 +.000203	280 284 288 292 296 301 307 311 315 319 +.000324

TABLE VI. — PARALLAX PLATE CONSTANTS — Continued.

Date.	PLATE	PLATE C	Onstants.	STANDARD (	Constants.	Refr	ACTION CONST	ANTS.
DAIS.	No.	Þ	r	Þ	r	Mz	My, Nz	Ny
Dec. 5 E.	713 714 715 716 717 718 719 720 721 722 723	000195 - 70 + 229 + 429 - 505 + 124 + 3 + 274 - 208 + 278 - 355	+.000232 + 123 + 269 - 352 - 365 + 145 + 144 + 4 - 18 + 28 - 233	000818 - 618	–.∞1918 – 1818	+.000346 342 338 334 330 328 325 320 316 314 311	+.000008 8 9 10 10 11 11 12 13	+.000245 " " 246 " 247 " "
w.	733 734 735 736 737 738 739 740 741 742 743	+ 78 - 152 + 241 - 399 + 119 + 2 + 47 - 106 + 149 + 55 + 4	- 83 + 155 - 35 + 395 - 52 - 97 + 320 - 325 + 151 + 168 - 613		oo1o38 - 957	609 621 633 645 657 669 681 693 705 717	101 108 116 124 132 140 147 155 163 171 178	274 278 282 285 289 293 296 300 304 307 310
Dec. 6 E.	744 745 746 747 748 749 750 751 752 753 754	+ 106 - 459 + 113 - 255 - 72 + 228 + 18 + 158 - 82 + 209 + 25	- 140 + 636 - 264 - 237 - 95 - 371 - 132 - 125 + 455 - 110 + 371	1	+.000226 + 414	+.000344 341 338 334 331 328 324 321 318 314	+.000007 7 8 8 9 10 10 11 11 12	+.000245 245 245 246 246 246 247 247
W.	764 765 766 767 768 769 770 771 772 773 774	+ 8 - 23 + 120 - 51 + 193 + 15 + 107 - 193 + 222 - 97000284	- 459 - 266 - 166 + 586 + 315 + 466 - 150 - 7 - 275 + 71000158		+.001243 + 1323	599 611 624 636 649 661 674 686 699 711 +.000724	98 105 113 121 129 137 144 152 160 168 +.000175	272 278 282 265 289 293 296 300 304 307 +.000310

TABLE VI. - PARALLAX PLATE CONSTANTS - Continued.

DATE.	PLATE	P	LATE C	ONSTAN	TS.	STANDARD (	Constants.	Refr	ACTION CONST	ants.
DATE.	No.		þ		•	Þ	•	M <sub>z</sub>	My, Nz	Ny
Dec. 7 E.	775	<b>–.</b> o	00062	+.0	00159			+.000339	+.000007	+.000246
	776	+	11	+	59			336	7	46
	777	+	89	+	186			333	8	"
i i	778	-	144	-	164			329	8	247
	779	<del>-</del>	143	-	62			326	9	"
	780	+	46	-	456			322	10	66
	781	+	42	+	222			318	10	
	782 783	_	51	_	36 281			315	11	248 "
l i	784	+	57 94	+	287			312	12	"
ĺ	785	+	131	+	127			305	12	44
	703	'	-3-	'	, I	000152	+.000077	3-3		
					II	- 432	+ 142			
]						10	,			
w.	796	+	148	-	63			579	88	269
	797	_	165	+	352			591	94	272
	798	_	91	-	37			603	101	275
	799	+	70	+	437			614	108	279
	800	+	53	-	20			626	115	282
	801	-	275	-	248			638	122	285
	802	+	30	-	535			649	129	289
	803	+	231	-	66			661	136	292
	804 805	+	118	+   +	125 260			673	143	295
	806	+	217 315	I	212			684 695	150 157	298 301
1	500		3*3		<sub>I</sub>	000647	+.001176	093	-3/	301
		Ì			II	- 798	+ 1346			
Dec. 24 E.	895	_	243		584			201	٥	250
200. 24 2.	896	+	148	_	167			280	Ö	-30
	897	<del> </del>	31	+	523			288	0	"
	898	_	4	+	357			285	1	"
	899	-	55	+	104			283	1	251
1	900	+	18	+	211			281	1	66
1	901	+	92	-	461_			279	2	••
1					I	000439	001611			
				i	II	<b>–</b> 650	- 1980			
w.	908	_	93	+	244			704	185	325
	900	+	160	_	25			722	196	331
	910	+	25	_	327			740	208	337
	911	_	229	-	349			763	223	346
	912	+	11	+	139			781	234	352
	913	+	185	+	96	l		799	246	359
	914	-	60	+	175_			+.000816	+.000257	+.000366
		1			I	000199	+.000522	ŀ		
		1			II	- 410	+ 432			
		L		<u> </u>				L	l	

Table VII. — Parallax Mean Places, Reduction to Apparent Place, and Parallax Corrections.

			MEAN a 19	)00. o.	MEAN 8 19	00. 0.	REDUCT APPAREN		PARALL	<b>ΑΧ</b> Δ.	
Date.	PLATE No.	Berlin M. T.	FIRST DETER-	SECOND DETER- MINA- TION.	FIRST DETER- MINATION.	SECOND DETER- MINA- TION.	α	8	a	8	π <b>f</b> .
		h m s	h m s	•	• , ,,	"					
Oct. 6 E.	92		2 43 41.1056								• •
	93	24 35 27 22	1	.0690 .0402		2.669		13.162 13.162		5.028	•
	94 95	36 35	1 2 7			5.335 14.100	1			4.916 4.539	1.46 1.44
	96	39 36				16.746	, , ,			4.418	
w.	104	25 24 50	2 43 34.6084	24.6084	46 50 28 458	28 202	±6 1128	上 12 222	+0.8823	-0.184	1.03
	105	39 47		.5489		32.758	1				•
ł	106	44 25		.4750		36.557					
	107	53 10	.3565	.3590		44.418		13.224	0.9542	0.365	1.11
	108	56 47	.3313	.3276	47.805	47.811	6.1146	13.225	0.9679	0.480	1.13
Oct. 12 E.	134	16 19 46	2 41 18.0924	18.1048	48 56 29.784	29.951	+6.3931	+14.422	-1.4225	+6.830	1.59
	135	22 33	.0236	.0294	32.018	32.089	6.3932			6.701	1.59
l	136	26 10				35.216				6.535	
	137	33 43		.7224		41.959					•
l	138	37 43		.6032		45.399			1		1.59
	139 140	47 ° 50 40	1	.3831 .2722		53.663 5 <b>6.61</b> 6				5.577 5.410	1.58 1.58
w.		25 22 25	969	0			16				
<b></b>	145	25 33 35 37 18				20.751					I.22 I.24
•	147	45 22				27.120				0.534	•
	148	51 22				31.947			1 2 1		
Oct. 13 E.	150	16 8 44	2 40 39.5839	30.6007	40 IÓ 13.246	13.057	+6.4411	+14.665	-1.4154	+7.165	1.61
	151	12 58		.5288		17.040	6.4412			6.966	
	152	15 33		.4501		19.615			1.4156	6.844	1.61
	153	28 44	.0330	.0565	30.675	30.560	6.4414	14.668	1.4122	6.372	1.61
w.	163	25 40 33	2 40 20.4728	20.4651	49 24 8.443	8.563	+6.4604	+14.787	+1.1590	+0.427	1.29
	164	43 10		.3683		10.697	6.4604	14.787		0.551	1.30
	165	46 55			, 0000	13.739					1.31
	166 167	54 35				19.541		14.789	1 1		1.34
	168	57 33 26 5 35		.8734 .6347		21.621 27.989		14.790		1.109	1.36 1.38
	169	8 33				30.503				1.551	-
Oct. 14 E.	170	16 23 10	2 39 56.1013	56,0007	40 25 50.525	50.202	+6.4802	+14.052	-1,4718	+6,200	1.62
	171	26 10		55.9808				14.952			1.62
	172	30 22				5.378					1.62
	173	43 43				16.917		14.954	1.4571	5.315	
	174	46 35				19.328				5.179	1.61
	175	55 35				27.079				4.756	
	177	58 50 17 8 26		54-9355 .6138		29.807 37.836		14.957 14.960		4.605 4.160	1.59 1.57
	178	11 26				40.218			امقا		1
w.	187	25 2T TR	2 39 35.8295	25 8170	40 42 25 057	25.025	+6.5072	+15.062	+1.1616	+0.206	1.28
	188	34 23				28.268					
i l	189	39 20				31.984					
1	190	49 50	.1679	.1617	40.028	40.123	6.5078	15.068	1.2332	0.924	
1	191	52 50				42.566			1		1
1	192	26 I O		34.7376		48.725 50.859					1.40
	193	4 11	.6438	.6351	: 50.782	I SOLATA	. U.SOA 2	15.071			1.41

TABLE VII. — PARALLAX MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

			Mean a 19	)00. O.	Mean	δ 19	oo. o.	REDUCT APPARENT		PARALL	ах Δ.	
Date.	PLATE No.	Berlin M. T.	First Deter- MINATION.	SECOND DETER- MINA- TION.	First Di		SECOND DETER- MINA- TION.	a	8	a	8	πí.
Oct. 15 E.		h m s		8		"	"	+6.5359	1 = = = = =	- 406-	16000	- 6.
Oct. 15 E.	195 196	16 23 O	1 - 1 - 1				12.931	6.5360	15.245	-1.4961 1.4932	5.870	
	197	37 50	7.9055				21.723		15.245	1.4845	5.375	1.63
	198	40 46		.7883			24.150		15.247	1.4816		1.63
i .	199 201	47 50 58 18	7.5374				29.997	6.5366		1.4732	4.896	_
	202	17 1 23					38.765 41.389	6.5369 6.5371	15.250 15.251	-	1	
w.	213	25 30 33	2 38 46.4088			5.388	25.378			+1.1989	+0.281	1.31
	214	33 33	1 1 1				27.535	6.5537	15.360			
	215	36 18		.1782 45.7885			29.827 37·744	6.5538 6.5540				•
	217	45 59 48 21					39.481	6.5542			-	
	218	55 50	.4268	.3976	43	3.917	43.987	6.5544	15.363		:	1.42
]	219	59 21		000			46.787	6.5544			1	
	220	26 6 23 9 11	1	44.9852 .8839			51.806 54.283	6.5547 6.5548		-	1 11	
Oct. 16 E.	222	-	2 38 16.7238									•
Oct. 10 E.	223	15 10 11 10			1		47.700	6.5815				_
	224	20 20	.3541	.3441			51.772	6.5816			6.006	1.66
	225	28 50		15.9997			58.748	6.5819				
	226	33 33					2.601	6.5820 6.5822				
	227	40 33 43 23					8.298 10.741	6.5823	15.552 15.552			
	230	54 21					19.776	6.5827				
w.	239	25 45 36	2 37 51.7675	51.7684	50 21 11	1.066	11.042	+6.5992	+15.677	+1.2975	+1.015	1.41
	240	49 47					14.012	6.5993				1.43
	241	54 35 26 0 43					17.567 22.097	6.5995				1.45
1	242	3 43		-			24.134	6.5997 6.5998				1.47 1.48
	244	9 35		50.7548			28.255	6.6000				1.50
Oct. 21 E.	247	15 57 35	2 32 48.2349	48.2346	51 40	4.074	4.067	+6.7901	+17.291	-1.6565	+5.968	1.75
	248	16 0 11	.0844	.0827		5.729	5.642	6.7902	17.292	1.6545	5.830	1.75
	250	13 27 19 18					15.308	6.7905				1.73
	251	22 59		.0459 46.8477			19.377 22.200	6.7907 6.7907				1.73 1.72
	253	30 26	.4092	.4170	2	7.536	27.506	6.7910		1.6143	4.347	1.71
	254	33 36	.2492	.2487	29	9.801	29.790	6.7910	17.302	1.6084	4.084	1.70
w.	264		2 32 13.9276									
l	265	35 59					29.597	6.8052	17.440			
	266 267	38 59 47 34					31.170 36.433	6.8053 6.8055	17.441 17.443	1.4829		-
	268	49 49		12.9388			37.873	6.8055		:		• •
	269	58 42	.4365	.4323	43	3.147	43.086	6.8057	17.446	1.5453	2.531	1.63
	270 271	26 I 29 8 22	1	.2861 11.8824	, .,		45.040 48.989	6.8058 6.8060				
Oct. 24 E.	275		2 28 37.2076				3.109			-1.7172 1.7133		
	276	3 33 6 33		.0537 36.8724			4.690 6.494	6.8940 6.8940				•
	278	14 59	.3108				11.943	6.8941	18.530			
		,,	1									

TABLE VII. — PARALLAX MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

			MEAN a 19	)00. o.	ME	AN 8 19	00. 0.	REDUCT APPAREN	TION TO T PLACE.	PARALL	<b>ΑΧ Δ</b> .	
DATE.	PLATE No.	Berlin M. T.	First Deter- MINATION.	SECOND DETER- MINA- TION.		DETER- ATION.	SECOND DETER- MINA- TION.	a	8	a	δ	πf
			h m s	•	• /		"					
Oct. 24 W.	291	25 22 27 25 20	2 27 58.5423 .3330				30.102		+18.098 18.700	+1.5543 1.5647		
	293	28 27		اد -			33.367			1.5756		
	294	37 35	1	57.5157			38.157	6.9065				
	295	40 17					39.480		18.704			
	296	48 42		56.7604			43.829	6.9067				
	297 298	51 42 58 49					45·344 49.078	6.9067 6.9069				
Oct. 26 E.	319		2 25 30.3105									
	320	48 23	1	1			26.966 28.512	6.9520				1.8
	321	50 50 57 26		29.9676 5179			32.368	6.9521 6.9521	19.407 19.408	1.7695 1.7587	4.927 4.558	_
	323	16 0 37	.2974			34.105	34.209	6.9523				_
	324	6 33	28.8793	28.8848		37.409	37.515	6.9524				
	325	9 26	1				39.234		19.412			
	326 327	16 26 20 10		.1759 27.9183			43·375 45·414	6.9526 6.9527	19.414 19.415	1.7195	3.514 3.311	1.7
w.	336	25 32 33	2 24 46.6903			30.730	30.643	+6.9625	+19.595			
	337	35 43		Į.	1	32.281	32.181	6.9625				
	338	38 50 46 22	_	.2494 45.7126	1		33.651 36.993	6.9625 6.9627				
	339 340	49 21			ı		38.177			1.7210		
	341	56 50		44.9642			41.877	6.9629	-	1.7400		
	342	59 43		-	1		42.899	6.9629				
	343 344	26 7 59 11 10		.1504 43.9408			46.746 48.180	6.9631 6.9631	19.605 19.608		4.364 4.543	
Oct. 20 E.	345	15 42 50	2 20 21.0614	21.0618	53 25	26.783	26.818	+7.0174	+20.817	-1.8320	+4.441	1.8
-	346	45 22		20.8659			28.014					
	347	48 35					29.656	7.0174				'
	348	55 21 <b>58 4</b> 3		.0902 19.8463			32.678 34.478	7.0176 7.0176		1.8052		
	349 350	16 5 18					37.595	7.0176	_		3.163	
	351	8 11					39.004		1 - :	1.7723		_
w.	357 358	25 46 29 49 11	2 19 31.7521 .5609		53 29		37.156 38.098	+7.0244 7.0244				
	359	53 0	1 .				39.540	7.0244	1 1			_
Nov. 3 E.	396	15 21 43	2 10 49.0654	49.0714	54 4					-1.9332	+4.016	1.9
=	397	24 36	48.8204	48.8230		56.189	56.076	7.0653	23.336	1.9263	3.842	1.9
	398	27 33					56.869				•	
	399 400	34 °0 37 10		.0277 47·7235			58.819 59.850				_	
	401	43 23					1.670		23.341			_
	402	46 33	46.9032	46.9124		2.763	2.619	7.0654	23.343	1.8639	2.543	1.8
	404	56 47			l	5.725	_			ļ	, , ,	l
W.	417	25 49 22			54 7		14.584			+2.0018		
	419	55 46 26 0 28	.0495	.0681			15.736 16.462					
	421	4 10					16.926				1 1	ı
	422	9 33		50.9343		17.871	17.831	7.0649				2.0
	423	12 22	1	1			18.269					
	424	17 43				-	19.116				1	1
	425 426	20 33 23 33		49.9877 .7458	1		19.344 20.049					
	750	-3 33	1 ./304	1 ./430	İ	-2.711		,	-3.370		/	٠

TABLE VII. — PARALLAX MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

			Mean a ig	)00. o.	Mean 8 19	oo. o.	REDUCT APPAREN	TION TO	PARALL	Αх Δ.	
Date.	Plate No.	Berlin M. T.	FIRST DETER- MINATION.	SECOND DETER- MINA- TION.	FIRST DETER- MINATION.	SECOND DETER- MINA- TION.	α	8	a	8	πf.
		h m s		• ,	• ' "	"					
Nov. 10 E.	472 473	15 10 11	1 56 30.2241	30.2102 29.9319			+0.9870 6.9870		-1.9708 1.9597		
	474	16 12	, , , , ,		4.089		6.9870				1.95 1.94
	475	23 29	1		3.885		6.9870				1.91
	476	26 O		28.8218	4.015		6.9871			٠.	1.89
	477	32 11	.2639								
	478	35 10	27.9808	27.9748	3.952	4.118	6.9871	20.900	1.8673	0.804	1.86
w.	495	24 49 44	1 55 36.9579	36.9497	54 19 22.443	22.403	+6.9773	+27.167	+2.1070	+5.295	2.09
	496	53 0				21.995					2.10
	498	25 I 47		35.8842	20.514	20.623			1		
	501	14 10	34.8473	34.0409	10.024	18.860	6.9772	27.169	2.1404	6.914	2.13
Nov. 28 E.	615		1 28 53.0867								1.75
	616	53 29	, , , , , ,	52.9846		1.264		33.752			
	617 618	56 11 59 22	.8809 .7626			59.452 57.191		00.00			
	619	15 2 11	, ,	1 1 1		55.183					
	620	5 43			52.854	52.789	6.2877				
	621	8 43				50.564			1.5121	2.108	1.61
	622	11 22	.3166			48.841	6.2876	1			
	623 624	14 18 17 33	,,,			46.839 44.602					
	625	20 22		51.9693		42.724					
					,			***	,		· ·
w.	635		1 28 34.6934					+33.823			
	637	23 3 18 23 3 34	1	.5057		49.113	6.2733	33.824	2.1706 2.1713		72 22
	639	10 24				43.500	6.2732	33.826			
	640	12 27	.2109	.2212	41.405	41.340					
	643	34 34		33.5416		23.538	6.2725	33.828			
	644	37 34 38 10				20.301	6.2723	33.829	2.2243 2.2247		2.38
	647	46 34		.4270 .1623		13.659		33.829			,
N					40			ļ	į.		_
Nov. 29 E.	648 649	14 41 22 44 0	1 28 12.3428							, , ,	
	650	47 28				3.423 0.864				, ,	• • •
	651	50 0									• •
	652	53 21	, , ,	11.9682	56.897	56.833	6.2464	33.946	1.5845		1.70
	653	56 28	,			54.607					
	654 655	59 36 15 2 21				52.310 50.286				1.784 1.916	
	656	5 35				48.027					
	657	8 22	.4636	.4651	45.962	45.926	6.2459		1	2.205	
	658	11 11	.3692	.3700	43.838	43.773	6.2458	33-949	1.4573	2.338	1.56
w.	668	22 51 21	1 27 56.0922	56.0050	50 52 41.048	41.023	+6.2323	+34.011	+2.1478	+5.734	2.31
	669	54 11	.0051	.0115	38.579	38.534	6.2321	34.011		5.931	2.32
	670	57 33		55.9351		35.877					
	671 672	23 0 21			, 00	33.402 30.852					
	673	3 36 6 43				28.138	6.2319 6.2318		1 1 1		
	674	10 11				25.225				7.049	
	675	13 28	.5007	.5038	22.359	22.327	6.2316		2.1948	7.281	
	676	16 29				19.957		34.014			2.37
	677 678	19 43 22 36	·3377 .2652			17.008		34.015 34.016		7.724 7.928	_
	","		.2032	.2003	14.30/	14.30/	V.2313	34.010	2.2002	7.928	3/

TABLE VII. — PARALLAX MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

			Mean a iç	)00. o.	MEAN 8 19	oo. o.	REDUCT APPAREN	TION TO T PLACE.	PARALL	аж Δ.	
Date.	Plate No.	Berlin M. T.	FIRST DETER- MINATION.	SECOND DETER- MINA- TION.	First Deter- mination.	SECOND DETER- MINA- TION.	a	δ	α	δ	π f.
			h m s		. , ,,	"					
Dec. 5 E.	713		1 26 27.1653								
i	714	40 18 43 35	1 12.1	.1809 .1665		45.831 42.945	6.0180 6.0179			1.328	
	716	46 35	.1388	.1478		40.314	6.0178		1.4245	1.623	1.60
	717	49 11				38.557	6.0178			1.743	
	718	52 0		.1285		35.863	6.0177	1			1.55
İ	719	55 0		.1073		33.241	6.0177			•	1.52
	720 721	58 28 15 1 43	1 . 1	.0911		30.316 27.418	6.0177 6.0176		1.3363	2.155 2.205	1.49
	722	4 29		.0502		25.208	6.0175				I.47 I.44
	723	7 43		.0531		22.546	6.0174		1.2652		
w.	733	22 14 36	1 26 24.8148						+2.0740	+5.641	2.32
	734	17 29				46.980		0		5.837	-
	735	20 36				43.831	6.0063 6.0063	34.731	2.0012	6.048	•
i i	736	23 36 26 11	.8345		1	40.952 38.448	6.0062	,	2.0994 2.1061	. •	
Ì	738	20 11				35.464	6.0061	34.731	2.1134	_ : -	
	739	32 43	.8177	.8279	32.261	32.175	6.0060		2.1217		2.38
	740	35 35				29.394	6.0059		2.1281	7.077	2.39
	741	38 43	.8243	.8314		26.391	6.0058				2.39
	742 743	41 29 44 35	.8432 .8324			23.554 20.599	6.0057 6.0057		2.1401 2.1458		2.40 2.41
Dec. 6 E.	744		1 26 33.1734							-	
	745	37 26		.1925	- :	2.982	5.9846				
	746	40 29 43 11	.1639 .1726			59.981	5.9845 5.9844		1.4350		
	747	45 11	.1716	.1736		55.115	5.9844		1.4156		
	749	49 18				52.333	5.9843				1.54
	750	52 43	.1529	1 2 1		49.373	5.9843		1.3453	1.930	
	751	55 35	.1536		1	46.877	5.9842			2 '	1.49
	752	58 41				44.149	5.9841			1	
	753 754	15 1 35 4 35	- : '			41.751 39.078	5.9840 5.9839			2.308 2.431	I.44 I.41
w.	764		1 26 32.8915	-					+2.0575		_
	765	11 35		.9101	, , , , , , ,		5.9744				
	766 767	14 50 17 41	.9249 .9364			55.691 52.800	5.9743				2.35
	768	20 41			, ,	49.789	5.9741 5.9740			6.231 6.435	2.36 2.36
	769	23 35	.9726	-9743		47.058					2.37
1	770	26 11	.9908	.9949	44.508	44.468	5.9738	34.783	2.1066	6.812	2.38
1	771	29 47		33.0119		43.384				7.060	٠,
(	772	32 28				38.195	5.9735				2.40
	773 774	35 43 38 43				34.988 32.225	5.9734 5.9733			7.469 7.678	
Dec. 7 E.	775		1 26 45.7689	45.7678	48 14 54.057	53.924	+5.9526	+34.808	-1.4318	-1.204	1.63
<b>1</b>	776	39 35	.7909	.7903	49.295	51.370	5.9525	34.809	1.4083	1.356	
•	777	42 22				48.689	5.9524			1.483	•
<b>i</b>	778 779	45 II 48 II				46.272 43.612	5.9524		1.3675		
<b>!</b>	780	52 43				39.348	5.9523 5.9523		1.3453		I.53 I.49
	781	55 28	_ : '			37.070	5.9522				
•	782	58 21	.8757	.8730	34.553	34.431	5.9521	34.808	1.2682	2.174	
<b>,</b>	783	15 1 29	1 -1.5			31.618	5.9520	34.808	1.2440		1.41
	784 785	4 43		.8894		28.707	5.9519				
•	705	7 35	.9008	.8981	20.414	26.248	5.9519	34.808	1.1962	2.543	1.36

TABLE VII.—PARALLAX MEAN PLACES, REDUCTION TO APPARENT PLACE, AND PARALLAX CORRECTIONS — Continued.

			MEAN a 19	)00. o.	MEAN 8 19	oo. o.	REDUCT Apparen		Parall	<b>ΑΧ</b> Δ.	
Date.	PLATE No.	Berlin M. T.	First Deter- MINATION.	SECOND DETER- MINA- TION.	First Deter- mination.	SECOND DETER- MINA- TION.	a	δ	a	8	π f.
		h m s	b m s		• ' "	"					
Dec. 7 W.	796	21 57 46	1 26 47.5192	47.5161	48 7 55.095	55.105	+5.9426	+34.820	+2.0270	+5.267	2.31
	797	22 0 43	.5346	.5304	52.298	52.328	5.9425	34.820	2.0368	5.464	2.32
	798	3 43	.5671	.5684	49.259	49.263	5.9425	34.820	2.0463	5.662	2.33
	799	6 21	.5996		46.706	46.729	5.9424			5.839	2.33
	800	- 9 40				43.278	5.9423			6.062	2.34
	801	12 40				40.221	5.9423				
	802	15 25			,	37.450					
	803	18 40				34.271					•
	804	21 35	.7337			31.321			, ,,,,		_
	805	24 40				28.246				, , ,	2.39
	806	27 45	.8165	.8119	25.251	25.219	5.9420	34.822	2.1094	7.295	2.40
Dec. 24 E.	895	1441 0	1 46 6.6864	6.6849	41 18 8.717	8.588	+5.6240	+32.808	-0.9334	-0.279	1.20
	896	44 47	6.9589	6.9580	4.726	4.608	5.6240	32.808	.9045	.392	1.16
	897	47 0	7.1258	7.1274	2.355	2.342	5.6239	32.807	.8875	-455	1.14
	898	50 21	7.3821	7.3795	17 58.749	58.677	5.6239	32.807	.8617	-550	1.10
	899	53 29				55.477					1.07
	900	56 50				51.968			.8108	.726	1.04
	901	59 34	8.0375	8.0341	49.303	49.159	5.6238	32.804	.7895	∙795	1.01
w.	908	21 28 35	1 46 36.9425	36.9477	41 10 43.025	43.081	+5.6211	+32.734	+1.8926	+8.605	2.43
	900	31 35				39.641					
	910	34 11				36.724		,			2.44
	911	38 22	37.7132			32.076	1 ~		,		2.46
	912	41 46	37.9905			28.153					2.46
	913	44 43	38.2190	38.2249	24.660	24.702	5.6210			9.608	2.47
	914	47 46	38.4720	38.4764	21.186	21.267	5.6210			9.799	2.48
	L										

TABLE VIII. — PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS.

		Obser	VED «.			INTERVAL	OBLIQUITY ECLIPTIC	PERTUR- BATION	0	-Е
DATE.	PLATE No.	FIRST DE- TERMINATION.	SECOND DE- TERMINATION.	Ephemeris a.	Inter- VAL.	CORRECTIONS TO EPHRME-	CORRECTIONS TO EPHEMERIS.	CORRECTIONS TO EPHEMERIS.	First Determi- NATION.	SECOND DETERMI- NATION.
1900		h m s	h m s	h m s	ь		8	8	8	
Oct. 6 E.	92	2 43 45-9454	2 43 45.9413	2 43 46.0058			0180	+.0026	0450	0491
	93	45.9113	45.9118	45.9816			"	"	549	544
	94	45.8862	45.8860	45.9582			"		566	568
	95 96	45.8201 45.7843	45.8163 45.7744	45.8813 45.8558			"	25 "	457 560	495 659
w.	104	2 43 41.6045	2 43 41.6045	2 43 41.6644	8.2	002A	0180	+.0010	0414	0414
***	105	41.5673	41.5653	.6185	8.2	.0024	.0100	1.0019	327	347
	106	41.5068	41.5099	.5755	8.3		66	"	502	471
	107	41.4251	41.4276	.4942	8.3		"	"	506	481
	108	41.4138	41.4101	.4606	8.3		"	18	282	319
Oct. 12 E.	134	2 41 23.0630	2 41 23.0754	2 41 23.1483			0210	0123	0520	0396
	135	22.9946	23.0004	23.0777			"	124	497	439
	136	22.8319	22.8415	22.9860			"	"	1207	1111
	137	22.6899	22.6970	22.7942	i '		"	"	709	638
	138	22.5814	22.5799	22.6928			"	"	780 516	795
	139 140	22.3722 22.2491	22.3665 22.2588	22.4572 22.3641			"	"	816	573 719
w.	145	2 41 8.6913	2 41 8.6860	2 41 8.7879	9.2	0027	0210	0131	0598	0651
	146	8.5765	8.5678	8.6894	9.2		"	"	761	848
	147	8.3671	8.3557	8.4753	9.2		"	"	714	828
	148	8.2070	8.1995	8.3163	9.0		66	"	725	800
Oct. 13 E.	150	2 40 44.6096	2 40 44.6264				0212	0143	1245	1077
	151	44.5382	44.5543	44.6495 44.5761			"	"	758 841	597 649
	152 153	44.4565 44.0622	44.4757 44.08 <b>5</b> 7	44.2014			"	144	1036	801
w.	163	2 40 28.0922	2 40 28.0845	2 40 28.1909	9.5	0028	0216	0151	0592	<b></b> 0669
	164	27.9943	27.9978	28.1140	9.5		"	"	802	767
	165	27.9047	27.9059	28.0027	9.5		"	"	585	573
	166	27.6615	27.6623	27.7755	9.5		"	"	745	737
	167	27.5513	27.5563	27.6877	9.6 9.8	20	66	152	969	919 645
	169	27.3382 27.2486	27.3452 27.2527	27.4494 27.3614	9.7	29	"	"	715 731	690
Oct. 14 E.	170	2 40 1.1188	2 40 1.1082	2 40 1.2188			0220	0163	0617	0723
-	171	1.0103	0.9997	1.1241	1		"	164	754	860
	172	0.8852	0.8708	0.9917	]		"	"	681	825
	173	0.4918	0.4669	0.5705			"	"	403	652
	174	0.3571	0.3538	0.4799			66	66	844	877
	175	0.0848	0.0743	0.1958			"	"	726	831
	176	0.0009	39 59.9869 59.6805	0.0930 39 59.7898			"	"	537 573	677 709
	177	39 59.6941 59.5684	59.5689	59.6949			"	"	881	876
w.	187	2 39 43.4984	2 39 43.4859	2 39 43.6178	9.1	.0027	0220	0171	0776	0901
	188	43.3981	43-3953	43.5168	8.8	26	"	"	770	798
	189	43.2396	43.2344	43-3549	8.9		"	"	736	788
	190	42.9089	42.9027	43.0112	8.9		66	66	606	668
	191	42.8079	42.8007	42.9129	8.9		"		633	705
	192	42.5287	42.5180	42.6455	8.9		"	172	750	857
	193	42.4350	42.4263	42.5414	8.9		"		646	733

## PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS

TABLE VIII. — PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS — Continued.

		Obser	VED &.			INTERVAL CORREC-	OBLIQUITY ECLIPTIC	PERTUR- BATION	0-	-E
Date.	PLATE No.	FIRST DE- TERMINATION.	SECOND DE- TERMINATION.	Ephemeris 4.	INTER- VAL.	TIONS TO EPHEME- RIS.	CORRECTIONS TO EPHEMERERIS.	CORRECTIONS TO EPHEMERIS.	First Determi- NATION.	SECOND DETERMI- NATION.
1000		h m s	h m s	h m s	h		5			
Oct. 15 E.	195	2 39 13.4575	2 39 13.4537	2 39 13.5867	_	_	0222	0185	0885	0923
	196	13.3024	13.2959	13.4289			"	" "	858	923
	197	12.9573	12.9511	13.0724			"	186	743	805
	198	12.8440	12.8431	12.9708			"	44	860	869
	199	12.6008	12.5935	12.7253			"	"	837	910
	201	12.2365	12.2324	12.3617			"	187	843	884
:	202	12.1179	12.1166	12.2550			66	"	962	975
w.	213	2 38 54.1614	2 38 54.1561	2 38 54.2841	9.1	0027	0226	0197	0777	0830
	214	54.0577	54.0553	54.1766	9.1	"	"	"	739	763
	215	53.9557	53.9538	54.0780	9.1	"	"	"	773	792
i	216	53.6059	53.6012	53.7307	9.1	"	"	"	798	845
	217 218	53.5347	53.5263	53.6459	9.0	"	"	"	662	746 86a
	210	53.2750 53.1161	53.2458 53.1134	53.3771 53.2509	9.0	"	"	66	571 898	863 925
	220	52.8659	52.8687	52.9981	9.0	"	"	"	872	925 844
	221	52.7639	52.7764	52.8975	9.1	"	"	"	886	761
Oct. 16 E.	222	2 38 21.7788	2 38 21.7661	2 38 21.8622			0230	0213	0391	0518
	223	21.5883	21.5769	21.7048			"	"	722	836
	224	21.4140	21.4040	21.5160			"	214	576	676
	225	21.0770	21.0665	21.1944			"	"	730	835
	226	20.9002	20.8836	21.0160			"	"	714	880
	227	20.6424	20.6320	20.7511			"	"	643	747
	228 230	20.5304 20.1281	20.5151 20.1134	20.6439 20.2296			"	"	691 571	844 718
w.	239	2 37 59.6642	2 37 50.6651	2 27 50 7027	0.2	0028	0230	<b>022</b> I	0810	0801
***	240	59.5071	59.5037	2 37 59.7931 59.6300	9.3	0020	0230	0221	750	784
	241	59.3107	59.3124	59.4423	"	"	"	66	837	820
	242	59.0792	59.0786	59.2029	"	"	"	222	757	763
	243	58.9589	58.9603	59.0855	"	"	"	66	786	772
	244	58.7286	58.7325	58.8564	"	"	66	"	798	759
Oct. 21 E.	247	2 32 53.3685	2 32 53.3682	2 32 53-5497			0252	0313	1247	1250
	248	53.2201	53.2184	53.4105			**	46	1339	1356
	250	52.5049	52.5074	52.7002			"	"	1388	1363
	251	52.2020	52.2043	52.3867			"		1282	1259
	252	52.0102	52.0115	52.1896			"	314	1228	1215
	253 254	51.5859 51.4318	51.5937 51.4313	51.7902 51.6209			"	"	1477 1325	1399 1330
w.	264	2 32 22.1950	2 32 22.2008	2 32 22.3915	0.5	0028	0256	0321	1360	1302
	265	22.0483	22.0459	22.2373	9.5	"	"		1285	1309
	266	21.8844	21.8888	22.0731	"	"	44	66	1282	1238
	267	21.4045	21.4024	21.6029	"	"	"	"	1379	1400
	268	21.2631	21.2629	21.4799	"	"	"	"	1563	1565
	269	20.7875	20.7833	20.9933	"	"	"	"	1453	1495
	270	20.6479	20.6451	20.8407	"	"	66 66	322	1322	1350
	271	20.2650	20.2602	20.4635					1379	1427
Oct. 24 E.	275 276	2 28 42.3843 42.2296	2 28 42.3892 42.2344	2 28 42.6110 42.4465			0270	0373	1624 1526	1575 1478
	277	42.2561	42.0579	42.2593			"	"	1389	1371
	278	41.5113	41.5162	41.7322			"	"	1566	1517
	-,-	733	73-52	7/3-2					2,500	-3-/

TABLE VIII. - PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS - Continued.

		Obser	VED 4.			INTERVAL CORREC-	Овиопиту Еспьис	PERTUR- NATION	0-	-E
DATE.	PLATE No.	FIRST DE- TERMINATION.	SECOND DE- TERMINATION.	Ephemeris a.	INTER- VAL.	TIONS TO EPHEME-	CORRECTIONS TO EPHRME-	CORRECTIONS TO EPHRME-RIS.	First Deterni- nation.	SECOND DETERMA- NATION.
1900		b m s	h m s	h m s	ь	8	8	•	8	
Oct. 24 W.	291	2 28 7.0027	2 28 6.9893	2 28 7.2247	9.6	0028	0270	0381	1541	1675
	292	6.8038	6.7922	7.0415	"	"	"	"	1698	1814
	293	6.6190	6.6074	6.8436	"	"	"	"	1567	1683
	294	6.0386	6.0281	6.2624	"	"	"	"	1559	1664
	295	5.8813	5.8705	6.0908	"	"	"	66	1416	1524
l	296	5.3196	5.3064 5.1380	5.5553		"	"	"	1678	1810
	297 298	5.1472 4.6820	4.6746	5.3645 4.9117	"	"	"	382	1494 1617	1586 1691
Oct. 26 E.	319	2 25 35.4858	2 25 35.4891	2 25 35.7341		ļ F	0280	0412	1791	1758
ŀ	320	35.3145	35.3228	35.5642	ł		"		1805	1722
ľ	321	35.1492	35.1502	35.3979			"		1795	1785
	322 323	34.7094 34.4968	34.7113 34.5017	34-9495	1		"	"	1709 1671	1690 1622
ŀ	323	34.4908	34.5017	34.7331 34.3300			"	и	1071	1650
	325	33.8813	33.8884	34.1341	İ		"	"	1836	1765
	326	33.4055	33.4000	33.6583	ļ		u	"	1836	1801
	327	33.1534	33.1607	33.4046			"	"	1820	1747
W.	336	2 24 55.3274	2 24 55.3314	2 24 55.5779	9.8	0029	0280	0416	1780	1740
ļ	337	55.1066	55.1092	55.3594	""	"	"	"	1803	1777
	338	54.9069	54.9053	55.1444	"	"	"	"	1650	1666
!	339	54.3813 54.1821	54.3895 54.1880	54.6248	"	"	"	"	1710	1628 1585
	340 341	53.6505	53.6671	54.4190 53.9026	**	и	"	"	1644 1796	1630
ļ	342	53.4407	53.4504	53.7035	"	"	66	ш	1003	1806
ļ	343	52.8685	52.8770	53.1329	"	"	"	"	1919	1834
	344	52.6607	52.6733	52.9131	"	"	"	"	1799	1673
Oct. 29 E.	345	2 20 26.2468	2 20 26.2472	2 20 26.5088		1	0292	0462	1866	1862
ļ	346	26.0578	26.0563	26.3184	Ì		"	"	1852	1867
	347	25.8137	25.8087	26.0767			"	"	1876	1926
ļ	348	25.3085	25.3026	25.5686			"	"	1847	1906
ļ	349	25.0764	25.0667	25.3154	1	ŀ	"	"	1636	1733
	350 3 <b>5</b> 1	24.5560 24.3526	24.5527 24.3443	24.8208 24.6040			"	"	1894 1760	1927 1843
w.	357	2 19 40.6074	2 19 40.6230	2 19 40.8983	9.9	0029	0296	0466	2118	1962
ļ	358 359	40.4219 40.1261	40.4327 40.1370	40.6931 40.4029	66	"	"	"	1921 1977	1813 1868
Nov. 3 E.	396	2 10 54.1975		2 10 54.4987			0320	0531	2161	2101
1	397	53.9594	53.9620	54.2583	1		"	"	2138	2112
	398	53.7094	53.7054	54.0125	l		"	"	2180	2220
l	399	53.1782	53.1912	53.4747			"	"	2114	1984
	400	52.8961	52.8991	53.2105	}		"	i	2293	2263
	40I 402	52.4014 52.1047	52.4007 52.1139	52.6921 52.4280	1		"	532	2055	2062 2289
	404	51.2642	51.2670	51.5744			"	"	2381 2250	2222
w.	417	2 10 1.6701	2 10 1.6829	2 10 2.0147	10.5	.0000	0320	0536	2590	2462
	419	1.1224	1.1410	1.4779	"	"	"	"	2699	2513
	420	0.7388	0.7543	1.0837	"	"	66	"	2593	2438
	421	0.4271	0.4246	0.7734	"	"	"	"	2607	2632
ŀ	422	0.0026	0.0149 9 59.7708	0.3219 0.0856	"	"	"	"	2337	2214
ŀ	423 424	9 59·7574 59·2955	59.2922	9 59.6371	"	66	"	"	2426 2560	2292 2593
l	425	59.0566	59.0690	59.3998	"	"	"	"	2576	2593 2452
	7-3	39330	58.8266	39.3990	"	66	66	44	-3/0	2358

### PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS

TABLE VIII. - PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS - Continued.

		OBSER	VED &.			INTERVAL CORREC-	Овыопич Еспыяс	PERTUR- BATION	0	-E
DATE.	PLATE No.	FIRST DE- TERMINATION.	SECOND DE- TERMINATION.	Ephemeris a.	Inter- VAL.	TIONS TO EPHEME- RIS.	CORRECTIONS TO EPHEME- RIS.	CORRECTIONS TO EPHEME- RIS.	FIRST DETERMI- NATION.	SECOND DETERMI- NATION.
1900		h m •	h m s	h m s	h	8	8	8	8	
Nov. 10 E.	472	1 56 35.2403	1 56 35.2324	1 56 35.5503		_	0360	0610	2130	2209
	473	34.9566	34-9592	35.2962			"	"	2426	2400
	474	34.7386	34.7301	35.0380			"	"	2024	2109
	475	34.1045	34.0870	34.4180			"	"	2165	2340
	476	33.9085	33.9010	34.2035			44	"	1980	2055
	477	33.3702	33.3632	33.6778			"	"	2106	2176
	478	33.1066	33.0946	33-4243			**	"	2207	2327
W.	495	1 55 46.0422	1 55 46.0340	1 55 46.3127	9.6	.0000	0360	0610	1735	1817
	496	45.7450	45.7355	46.0216	66	"	"	"	1796	1891
	498	44.9916	44.9881	45.2910	"	"	"	"	2024	2059
	501	43.9649	43.9585	44.2409	"	"	"	44	1790	1854
Nov. 28 E.	615	1 28 57.7363	1 28 57.7403	1 28 58.0156			0430	1112	1251	1211
	616	57.6554	57.6543	57.9230			"	"	1134	1145
	617	57.5689	57.5677	57.8399			"	"	1168	1180
	618	57.4723	57.4748	57.7420			"	"	1155	1130
	619 620	57-3717	57.3776	57.6553			"	"	1294 1204	1235
	621	57.2721 57.1768	57.2739 57.1787	57.5467 57.4549			"	"	1230	1220
	622	57.1112	57.1121	57.3730		,	"	1113	1075	1066
	623	57.0135	57.0140	57.2832			"	"	1154	1149
	624	56.9140	56.0130	57.1832			"	"	1140	1150
	625	56.8341	56.8304	57.0967			"	"	1083	1120
w.	635	1 28 43.1239	1 28 43.1239	1 28 43.3897	8.3	+.0014	0430	1119	1123	1123
	637	42.9330		43.2146	"	"	"	"	1281	• • • •
	637		42.9496	43.2231	"	"	"	"	0-	1200
	639 640	42.7127	42.7314	43.0151	66	"	"	"	1489 1281	1302 1178
	643	42.6737 42.0253	42.6840 42.0357	42.9553 42.3101	44	"	"	"	1313	1200
	644	41.9466	42.0357	42.2224	"	"	"	"	1223	
	644	41.9400	41.0240	42.2056	"	"	"	"		1281
	647	41.6599	41.6645	41.9593	"	66	**	"	1459	1413
Nov. 29 E.	648	1 28 16.9249	1 28 16.9263	1 28 17.2175			0430	1132	1364	1350
	649	16.8744	16.8704	17.1485			"	"	1179	1219
	650	16.7743	16.7707	17.0576			"	"	1271	1307
	651	16.7170	16.7197	16.9916			"	"	1184	1157
	652	16.6278	16.6301	16.9035			"	"	1195	1172
	653	16.5363	16.5338	16.8220			"	"	1295	1320
	654 655	16.4453 16.3815	16.4494 16.3817	16.7405 16.6682			"	"	1390	1349 1303
	656	16.3104	16.3114	16.5836			"	"	1170	1160
	657	16.2314	16.2329	16.5108			"	"	1232	1217
	658	16.1577	16.1585	16.4374			"	1133	1234	1226
w.	668	1 28 4.4723	1 28 4.4751	1 28 4.7618	8.2	+.0014	0430	1139	1340	1312
	669	4.3922	4.3986	4.6920	"	"	"	"	1443	1379
	670	4.3286	4.3301	4.6092	"	"	"	"	1251	1236
	671	4.2668	4.2702	4.5403	"	"	"	"	1180	1146
	672	4.1678	4.1755	4.4602		"	"	"	1369	1292
	673	4.0998	4.0999	4.3834	"	"	"	"	1281	1280
	674	4.0166	4.0197	4.2987 4.2176	"	"	"	"	1266 1350	1235
	675 676	3.9271 3.8565	3.9302 3.8580	4.2170	66	"	"	"	1350	1319 1302
	677	3.0505	3.7789	4.0642	"	"	"	66	1352	1302
	678	3.7047	3.7078	3.9934	"	"	"	"	1332	1301
	',	3.7547	3.7-70	3-7734						

TABLE VIII. — PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS — Continued.

		Obser	VED G.			INTERVAL CORREC-	OBLIQUITY ECLIPTIC	PERTUR- BATION	0-	-E
DATE.	PLATE No.	FIRST DE- TERMINATION.	SECOND DE- TERMINATION.	EPHEMERIS a.	INTER- VAL.	TIONS TO EPHRME- RIS.	CORRECTIONS TO EPHEME-	CORRECTIONS TO EPHEME- RIS.	First Determi- nation.	SECOND DETERMI- NATION.
1900		h m s	h m s	h m s	h	8	8			
Dec. 5 E.	713	1 26 31.6945	1 26 31.6954	1 26 32.0194			0430	1231	1588	1579
	714	31.7277	31.7292	32.0242	l		"	"	1304	1289
	715	31.7282	31.7382	32.0300			"	"	1357	1257
	716 717	31.7321 31.7501	31.7411 31.7656	32.0358 32.0408	l		"	"	1376	1286
	718	31.7457	31.7614	32.0462			"	"	1156	1091
	719	31.7511	31.7627	32.0515	1		"	"	1344 1343	1227
	720	31.7623	31.7725	32.0582			"	"	1208	1196
	721	31.7702	31.7826	32.0646	1		"	66	1283	1159
	722	31.7696	31.7775	32.0700			"	"	1343	1264
	733	31.7955	31.8053	32.0763			"	**	1147	1049
w.	733	1 26 32.8953	1 26 32.8939	1 26 33.1924	8. 6	5	0430	1234	1322	1336
	734	32.8953	32.9025	33.2020	"	"	"	"	1418	1346
	735	32.9104	32.9100	33.2121	"	"	"	"	1368	1372
	736	32.9038	32.9177	33.2221		"	"	"	1534	<b>I39</b> 5
	737	32.9468	32.9456	33.2309	"	"	"	"	1192	1204
	738 739	32.9335 32.9454	32.9373 32.9556	33.2409 33.2525	"	"	"	"	1425	1387
	740	32.9508	32.9563	33.2622	**	"	"	"	1422	1320
	74I	32.9647	32.9718	33.2731	**	"	"	"	1435	1364
	742	32.9890	32.9932	33.2824	"	"	"	"	1285	1243
	743	32.9839	32.9851	33.2928	"	"	"	66	1440	1428
Dec. 6 E.	744	1 26 37.6811	1 26 37.6838	1 26 37.9703			0430	1241	1221	1194
	745	37.7306	37.7204	37.9889			"	"	0912	1014
	746 747	37.7134	37.7201 37.7356	38.0084 38.0260	ļ		"	"	1279	1212
	748	37.7414 37.7624	37.7644	38.0452	1		"	"	1175	1233
	749	37.7553	37.7612	38.0652			"	"	1428	1369
	750	37.7919	37.7976	38.0875			"	"	1285	1228
	751	37.8141	37.8175	38.1062			"	"	1250	1216
	752	37.8314	37.8308	38.1263			"	"	1278	1284
	753	37.8602	37.8672	38.1455			"	66	1182	1112
w.	754	37.8654	37.8708	38.1651					1326	1272
₩.	764 765	1 26 40.9235 40.9531	1 26 40.9280	1 26 41.2225	8.6	+.0015	0430	I244 "	1331 1300	1286 1308
	766	40.9764	40.9768	41.2748	"	"	66	"	1325	1321
	767	40.9956	41.0008	41.2980	"	"	"	66	1365	1313
	768	41.0216	41.0215	41.3215	"	"	"	"	1340	1341
	769	41.0469	41.0486	41.3441	"	66	"	"	1313	1296
	770	41.0712	41.0753	41.3649	"	"	"	"	1278	1237
	771	41.0960	41.1004	41.3935	"	"	66 66	"	1316	1272
	772	41.1155	41.1162	41.4148	"	"	"	66	1334	1327
	773 774	41.1458 41.1689	41.1504 41.1712	41.4410	"	"	"	"	1293	1247
Dec. 7 E.	775	1 26 50.2897	1 26 50.2886	1 26 50.5778			0430	1251	1200	1211
	776	50.3351	50.3345	50.6143	1		"	"	1111	1117
	777	50.3546	50.3614	50.6454			"	44	1227	1159
	778	50.4052	50.4061	50.6766	1		"	66	1033	1024
	779 780	50.4542	50.4507	50.7098	l		"	"	0875	0910
	781	50.4857 50.5277	50.4916 50.5315	50.7597 50.7903	1		ш	"	1059	1000
	782	50.5596	50.5569	50.7903	I		"	"	0945 0947	0907 0974
	783	50.5859	50.5854	50.8572			"	"	1032	1037
	784	50.6210	50.6227	50.8932	l		u	u	1041	1037
	785	50.6565	50.6538	50.9251	ł		"	"	1005	1032

### PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS

TABLE VIII. — PARALLAX TRUE PLACES AND CORRECTIONS TO EPHEMERIS — Continued.

		OBSER	VED a.			INTERVAL CORREC-	Obliquity Ecliptic	PERTUR- BATION	0-	-E
DATE.	PLATE No.	FIRST DE- TERMINATION.	SECOND DE- TERMINATION.	Ephemeris a.	INTER- VAL.	TIONS TO EPHEME- RIS.	CORRECTIONS TO EPHRME-RIS.	CORREC- TIONS TO EPHRME- RIS.	First Determi- nation.	SECOND DETERMI- NATION.
1900		h m s	h m s	h m s	ь					
Dec. 7 W.	796	1 26 55.4888	1 26 55.4857	1 26 55.7611	7.4	+.0013	0430	1254	1052	1083
	797	55.5139	55.5097	55.7977	"	"	"	"	1167	1200
	798	55-5559	55.5572	55.8355	"	"	"	"	1125	1112
	799	55.5962	55.5938	55.8680	"	"	"	"	1047	1071
	800	55.6220	55.6206	55.9092	"	"	"	"	1201	1215
	801	55.6763	55.6746	55.9468	"	"	"	"	1034	1051
	802	55.7128	55.7050	55.9810	"	"	"	"	1011	1089
	803	55.7402	55.7379	56.0218	"	"	"	"	1145	1168
	804	55.7713	55.7707	56.0582	"	"	"	44	1198	1204
	805	55.8169	55.7966	56.0968	"	"	"	"	1128	1331
	806	55.8679	55.8633	56.1354	- "	"	"	"	1004	1050
Dec. 24 E.	895	1 46 11.3770	1 46 11.3755	1 46 11.6016			0360	1219	0667	0682
	896	11.6784	11.6775	11.9066	l		"	"	703	712
	897	11.8622	11.8638	12.0854	1		"	46	653	637
	898	12.1443	12.1417	12.3557	1		"	"	535	561
	899	12.3932	12.3940	12.6085	ļ		"	**	574	566
	900	12.6590	12.6562	12.8787	1		"	"	618	646
	901	12.8718	12.8684	13.0992			"	"	695	729
w.	908	1 46 44.4562	1 46 44.4614	1 46 44.6684	6.8	+.0012	0360	1216	0558	0506
	909	44.7063	44.7110	44.9131	"	"	"	"	504	457
	910	44.9078	44.9161	45.1254	"	"	"	"	612	529
	911	45.2485	45.2554	45.4668	"	"	"	"	619	550
	912	45.5325	45.5383	45-7447	"	"	"	"	558	500
	913	45.7664	45.7723	45.9857	"	"	"	"	629	570
	914	46.0248	46.0292	46.2346	"	"	"	"	534	490

TABLE IX. - STAR POSITIONS USED IN PARALLAX WORK.

DATE.	STAR.	a 1900. o.	ð 1900. o.	AUTHORITY.	DATE.	STAR.	a 1900. o.	ð 1900. o.	AUTHORITY.
Oct. 6	a b c d e f g h i l m n o	h m s 2 43 18.309 43 17.367 43 20.313 43 34.583 43 42.884 43 48.042 43 54.418 44 11.017 44 28.897 43 57.585 43 8.890 43 38.445 43 4.018	59 53.10 52 3.37 47 10.04 47 3 31.10 46 51 32.13 57 24.77 42 12.97 45 22.37	Crossley	Oct. 15	a b f g h i n o	h m s 2 38 16.158 38 30.805 39 14.377 34.881 39.059 48.887 39 59.657 38 27.981	49 54 5.66 57 9.06 51 57.83 53 7.32 58 56.52 50 0 33.83 49 53 16.32 50 7 30.26	A. R. H. " " " " " " " " "
Oct. 12	a b c d e f g m n o p	40 46.648 40 55.416 40 58.831 41 20.447 41 26.331 42 15.629 41 25.409 41 58.921	49 2 11.39 48 51 22.98 49 4 0.13	66 66 66 66 66 66	Oct. 16	a b c d e f g h i l m n o	2 37 18.440 40.523 42.353 37 53.126 38 4.868 7.661 12.844 25.133 50.890 49.781 38 27.981 37 21.625 37 56.528	50 24 35.32 12 16.20 16 1.70 17 27.92 18 13.28 25 43.50 17 43.40 19 33.28 14 59.57 11 8.68 7 30.26 27 1.16 29 42.10	A. R. H.  " " " " " Crossley A. R. H. "
Oct. 13	b c e f g h m	2 39 33.241 40 15.60 40 39.87 40 48.788 40 53.454 40 54.71 40 8.366 39 30.284	49 21 32.44 25 18.6 23 31.5 15 56.47 21 21.82 27 15.8 8 23.49 30 30.85	A. R. H.  " Crossley A. R. H. Crossley	Oct. 21	a b c d e f g h l m n o	2 31 44.838 32 2.918 14.579 25.609 30.685 32 58.211 33 11.541 21.596 30.965 33 33.411 31 33.302 32 39.465	51 49 24.71 45 47.04 41 48.94 54 29.59 36 59.21 37 33.41 43 54.78 42 33.83 37 3.48 34 27.55 57 12.78 56 36.85	Crossley A. R. H.
Oct. 14	a b c d e f g h i m o	2 38 51.599 39 16.705 30.284 31.890 37.704 42.818 39 58.380 40 1.623 23.334 40 53.14 39 59.431	49 34 54.85 38 24.00 30 30.85 40 45.31 47 29.68 43 41.21 37 8.87 47 58.01 40 4.66 37 33.1 51 17.06	Crossley	Oct. 24	a b c d e f g h i j l m n o	2 27 16.861 36.495 44.893 27 52.139 28 18.595 20.788 24.692 40.461 28 54.428 29 3.641 24.847 20 19.304 27 7.387 27 40.966	52 23 26.00 33 17.66 24 21.73 19 30.16 30 38.02 27 54.33 33 51.33 30 47.99 22 16.70 27 47.12 16 20.87 21 18.78 35 33.15 38 51.82	A. R. H.  Crossley A. R. H.  "  "  "  "  "  "  "  "  "  "  "  "  "

#### STAR POSITIONS USED IN PARALLAX WORK

TABLE IX. - STAR POSITIONS USED IN PARALLAX WORK - Continued.

DATE.	STAR.	<b>#</b> 1900. 0.	ð 1900. o.	AUTHORITY.	DATE.	Star.	<b>a</b> 1900. o.	ð 1900. o.	AUTHORITY.
		h m s	• , ,,		ļ		h m s	• , ,,	<del></del>
Oct. 26		2 24 24.576	52 55 11.43	A. R. H.	Nov. 29			50 58 5.12	A. R. H.
	Ъ	55.838	57 9.21	"	1	b	27 14.732		"
1	C	58.712	54 53.96	"		С	27 16.032	52 13.88	**
	d	24 58.963	47 47.91	Crossley	[	d	28 23.488	51 1 26.91	"
	f	25 29.245	56 55.78	A. R. H.	11	e	29.882	50 59 23.74	"
i	g	32.083	51 50.15	Crossley	li l	f <sub>1</sub>	32.652	48 54.39	Crossley
	h	31.215	45 43.48	"		f <sub>2</sub>	32.660	48 54.70	A. R. H.
1	1	25 59.857	46 26.08	A. R. H.	ii l	g	42.774	55 19.67	Crossley
l l	m	26 7.886	49 30.40	"	1	h	48.374	56 44.66	A. R. H.
,	n	24 30.170	53 3 22.93	"	1	1	28 18.361	51 5 42.97	66
ľ	0	23 57.327	0 46.23	"		m	27 36.907		44
						n		50 42 0.70	"
						0	27 10.929	43 20.01	"
Oct. 20		2 19 3.966	53 26 53.95	A. R. H.	Dec. 5		1 25 51.471	48 51 2.88	A. R. H.
000. 29	Ď	14.044	23 31.32	"	200. 3	b	26 12.465		"
l	č	17.214	30 18.25	"	li i	c	24.964		**
1	ď	19 41.747	28 41.11	"	<u> </u>	ď	30.780		"
l	e	20 4.053	31 43.54	"		e	40.665	• • • •	"
ŧ	f	18.659	28 37.59	"		f		49 4 59.76	"
	g	17.608	27 19.21	"	il i	g	27 3.377	48 51 11.90	Crosslev
	h	36.315	28 13.95	"		ĥ	27 30.167		A. R. H.
	i	39.714	23 34.51	"		ī		49 10 55.87	"
i	1	20 31.617	17 3.80	"		0		48 44 41.31	"
	m	21 21.501	24 58.65	"		p	27 8.327		66
	0	18 34.133	37 27.52	"		•	, , ,		
- 1	P	18 45.287	27 7.74	"					
Nov. 3	_			A. R. H.	D 6			.0 0	A D U
1404. 3	a b		54 I 3.75	А. К. П.	Dec. 6	8		48 29 8.45	А. К. П.
	ď	9 45.601	7 50.31	"	il i	ь	53.842		66
		10 4.731		66		d	26 22.548		66
	e f	10 42.388	7 36.29		1		27.341		
	h	11 2.288 11 6.880	6 21.36		l l	f	58.064	26 27.72	66
j	i		0 3.10	"			27 4.931	39 47.14	
	m	11 54.635	2 11.30	"	l l	g h	8.541		66
i	0	12 6.458 9 16.540	5 <b>44</b> .66 10 38.08	"		i	16.197		66
		8 33.545	11 47.76		ll l	m	26 44.949 27 8.327	44 41.31	66
	P	0 33.343	11 4/./0			о ш	27 19.261	44 12.21 26 21.16	**
				_	<b>J</b>		1 ' '		
Nov. 10			54 21 59.01		Dec. 7		1 26 25.959	48 4 36.11	A. R. H.
	ъ	16.978	18 36.86		1	ъ	30.200	9 25.01	44
	C	25.248	14 33.59	"		C	34.284	7 6.50	44
	d	47-394	18 12.56	"	1	đ	43.127	9 25.10	"
	e	55 51.131	23 40.71		1	e	26 44.108	10 5.97	"
	f	56 34.218	28 59.22	Crossley	<b>l</b> l 1	f	27 7.068	11 46.14	"
	g	35.581		A. R. H.		g	26 57.140	16 4.51	. "
	h	56 42.921	22 33.93	"	1	h	27 45.245	10 28.54	. "
}	I .	57 12.806	20 10.09	"		1	26 58.064	26 27.72	"
	m	57 42.971	22 39.69	"	]	m	27 8.541	26 36.90	1
	P	55 0.636	21 3.05	"	<u> </u>	P	27 24.625	2 5.53	(*)
Nov. 28		1 27 42.885	51 16 47.67	Crossley	Dec. 24		1 45 31.946	41 18 37.87	A. R. H.
•	C	28 34.347	12 10.95	A. R. H.		b	48.725	6 24.92	"
	•	29 3.560	7 46.25	"		c	47.579	13 46.44	44
	f	29 16.310	6 55.65	"	li l	ď	50.488	21 46.48	"
j	g	29 25.865	10 54.25	"	<b>K</b> 1	e	46 18.675	9 38.34	"
	h	29 41.498	16 52.75	"	1	ť	25.027	8 20.77	(*)
	m	28 39.500	28 49.68	"	H I		26.888	7 29.69	Crossley
	n	28 18.361	5 42.97	"		g	52.327	15 29.08	"
ł	0	27 36.907	9 21.30	"		j	8.058	13 44.52	A. R. H.
		1		1		í	45 54.028	26 0.27	"
j				ŀ		m	45 35.559	23 55.83	66
1				1	11	P	46 58.670	3 59.68	"
		1	I	ı	li l	•	1 . 5	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	I

<sup>\*</sup> Conférence Astrophotographique Internationale Circulaire 11, 12.

TABLE X.—Selections of Stars used in Reductions.

DATE.	First Solution.		SECOND SOLUTION.
Oct. 6	abcdefghi	East West	abcdefghilm abcdefghino
12	abcdefg	E. W.	abcdefgmn abcdegop
13	bcefgh	E. W.	bcefghm bcefgho
14	abcdefghi	E. W.	bcdgim bdefho
15	a b f g h i	E. W.	abfghin abhio
16	abcdefghi	E. W.	bdegilm abcefghno
21	abcdefgh `	E. W.	bcefghlm abcdefhno
24	abcdefghij	E. W.	bdeghijlm bcefghno
26	abcdefgh	<b>E</b> . <b>W</b> .	bcdfghlm abcfgno
29	a b c d e f g h i	<b>E</b> . <b>W</b> .	cdefghilm abcdefgiop
Nov. 3	abcdefh	E. W.	abdefhlm abdeop
10	abcdefgh	E. W.	adeghlm abcefgp
28	a c e f g h	<b>E</b> . <b>W</b> .	acefghm acefgno
29	abcdefgh	E. W.	abcdefghlm abcdefghno
Dec. 5	abcdefgh	E. W.	abcdefl abcdegop
6	abcdefgh	E. W.	abcdflm abcdegho
7	abcdefgh	E. W.	abcdefglm abcdefgp
24	abcdefgij	E. W.	acdehijlm efgijp

TABLE XI. — DERIVATIONS OF CORRECTIONS TO ASSUMED PARALLAX.

	Nos. Plati	ES COMBINED.	(E-	W) <sup>s</sup> ∙		(E-	₩)".		Δ	π,	
DATE.	East.	West.	FIRST DETERMI- NATION.	SECOND DETERMI- NATION.	15 COS ð	FIRST DETERMI- MATION.	SECOND DETERMI- NATION.	Zπ f.	FIRST DETER- MINA- TION.	SECOND DETER- MINA- TRON.	Weight.
Oct. 6	92 93 94 95 96	104 105 106 107 108	0036 - 222 - 64 + 49 - 278	*0077 - 197 - 97 - 14 - 340	10.24	"03692273 - 655 + 5022847	"07882017 - 993 - 1433482	2.49 2.51 2.53 2.55 2.55	"015 - 91 - 26 + 20 - 111045	"032 - 80 - 39 - 6 - 135058	12.5 17.6 12.7 15.3 12.8
Oct.12	134 135, 6 137, 8 139, 40	145 146 147 148	+.0078 - 91 - 30 + 59	+.0255 + 73 + 112 + 154	9.84	+.0768 - 895 - 295 + 581	+.2509 + 718 +.1102 +.1515	2.81 2.83 2.86 2.88	+.027 - 32 - 10 + 20 +.001	+.090 + 25 + 39 + 53 +.052	22.5 22.6 28.6 31.7
Oct. 13	150 151 152 153	163 164, 5, 6, 7 168 169	0653 + 17 - 126 - 305	0408 + 152 - 4 - 111	9.76	6373 + 166 - 1230 - 2977	3982 +.1484 - 39 1083	2.90 2.95 2.99 3.01	- 220 + 6 - 41 - 99 088	137 + 50 - 1 - 36 031	11.6 20.7 17.9 15.1
Oct. 14	170, 1, 2 173 174 175 176 177 178	187 188 189 190 191 192	+.0092 + 367 - 108 - 120 + 96 + 177 - 235	+.0098 + 146 - 89 - 163 + 28 + 148 - 143	9.71	+.0893 +.3564 1049 1165 + 932 +.1719 2282	+.0952 +.1418 - 864 1583 + 272 +.1437 1389	2.90 2.90 2.93 2.95 2.96 2.97 2.98	+.031 +.123 - 36 - 39 + 31 + 58 - 77 +.013	+.033 + 49 - 30 - 54 + 9 + 48 - 47 +.001	26.1 14.5 23.4 14.8 11.8 11.9
Oct. 15	195 196 197 198 199 201	213 214 215 216 217 218, 19, 20 221	0108 - 119 + 30 - 62 - 175 - 63 - 76	0093 - 160 - 13 - 24 - 164 - 7 - 214	9.65	1042 1148 + 290 - 598 1689 - 608 - 733	0897 1544 - 125 - 232 1583 - 68 2065	2.95 2.97 2.97 3.01 3.01 3.03 3.05	035 - 39 + 10 - 20 - 56 - 20 - 24 026	030 - 52 - 4 - 08 - 53 - 2 - 68 031	11.8 17.8 17.8 18.1 15.1 21.2
Oct. 16	222, 3 224, 5 226 227 228 230	239 240 241 242 243 244	+.0254 + 97 + 123 + 114 + 95 + 227	+.0124 + 28 - 60 + 16 - 72 + 41	9.58	+.2433 + 929 +.1178 +.1092 + 910 +.2175	+.1188 + 268 - 575 + 153 - 690 + 393	3.07 3.09 3.10 3.11 3.11 3.12	+.079 + 30 + 38 + 35 + 29 + 70 +.047	+.039 + 9 - 19 + 5 - 22 + 13 +.004	15.4 27.8 18.6 15.6 15.6 21.8
Oct. 21	247 248 250 251 252 253 254	264 265 266 267 268, 9 270 271	+.0113 - 54 - 106 + 97 + 280 - 155 + 54	+.0052 - 47 - 125 + 141 + 315 - 49 + 97	9.29	+.1050 - 502 - 985 + 901 +.2601 1440 + 502	+.0483 - 437 1161 +.1310 +.2926 - 455 + 901	3.29 3.30 3.29 3.32 3.34 3.35 3.36	+.032 - 15 - 30 + 27 + 78 - 43 + 15 +.009	+.015 - 13 - 35 + 39 + 88 - 14 + 27 +.015	23.0 16.5 16.4 23.2 23.4 16.7 16.8
Oct. 24	275 276 277 278	291, 2 293, 4 295, 6 297, 8	0004 + 37 + 158 - 10	+.0169 + 196 + 296 + 121	9.14	0037 + 338 +.1444 - 91	+.1545 +.1791 +.2705 +.1106	3.40 3.43 3.46 3.48	001 + 10 + 42 - 3 +.012	+.045 + 52 + 78 + 32 +.052	20.4 27.4 27.7 27.8

TABLE XI. — DERIVATIONS OF CORRECTIONS TO ASSUMED PARALLAX — Continued.

	Nos. Plates	COMBINED.	(E-	W) <sup>8</sup> ·		(E-	<b>W</b> )".		Δ	π.	
DATE.	East.	WEST.	First Determi- nation.	SECOND DETERMI- NATION.	15 COS δ	First Determi- NATION.	SECOND DETERMI- NATION.	Σπf.	FIRST DETER- MINA- TION.		WEIGHT.
Oct. 26	319 320 321 322 323 324 325 326 327	336 337 338 339 340 341 342 343 344	5 0011 - 2 - 145 + 1 - 27 + 91 + 67 + 83 - 21	0018 + 55 - 119 - 62 - 37 - 20 + 41 + 33 - 74	9.05	"0100 - 181312 + 9 - 244 + 824 + 606 + 751 - 190	"0163 + 4981077 - 561 - 335 - 181 + 371 + 299 - 670	3.55 3.55 3.56 3.57 3.57 3.58 3.57 3.58 3.58	"003 - 1 - 37 - 7 + 23 + 17 + 21 - 5 +.001	"005 + 14 - 30 - 16 - 9 - 5 + 10 + 8 - 19006	21.3 17.8 14.2 25.0 14.3 21.5 21.4 17.9 14.3
Oct. 29	345, 6 347, 8 349, 50, 51	357 358 359	+.0259 + 59 + 214	+.0098 - 103 + 34	8.93	+.2313 + 527 +.1911	+.0875 - 920 + 304	3.72 3.70 3.68	+.062 + 14 + 52 +.043	+.024 - 25 + 8 +.002	40.9 33.3 40.5
Nov. 3	396 397 398 399 400 401 402 404	417 419 420 421, 2 423 424 425 426	+.0429 + 561 + 413 + 358 + 133 + 505 + 195 + 202	+.0361 + 401 + 218 + 439 + 29 + 531 + 163 + 136	8.80	+ 3775 + 4937 + 3634 + 3150 + 1170 + 4444 + 1716 + 1778	+.3177 +.3529 +.1918 +.3863 + 255 +.4673 +.1434 +.1197	3.93 3.94 3.93 3.93 3.90 3.88 3.88	+.096 +.125 + 92 + 80 + 30 +.115 + 44 + 46 +.078	+.081 + 90 + 49 + 98 + 7 + 120 + 37 + 31 +.064	27.5 27.6 19.6 27.5 19.5 19.4 19.4
Nov. 10	472, 3 474 475 476, 7, 8	495 496 498 501	0543 - 228 - 141 - 308	0487 - 218 - 281 - 332	8.75	4751 1995 1234 2695	4261 1908 2459 2905	4.05 4.04 4.02 4.00	117 - 49 - 31 - 67 066	105 - 47 - 61 - 73 071	24.3 20.2 24.1 28.0
Nov. 28	615 616 617 618 619, 20 621, 2	635 637 639 640 643 644	0128 + 147 + 321 + 126 + 64 + 66 + 333	0088 + 55 + 122 + 48 - 1 + 138 + 273	9.39	1202 +.1380 +.3014 +.1183 + 601 + 620 +.3127	0826 + 516 +.1146 + 451 - 9 +.1296 +.2563	4.05 4.04 4.04 4.02 4.02 3.98 3.92	030 + 34 + 75 + 29 + 15 + 16 + 80 +.031		28.4 32.3 16.2 28.1 44.2 47.8 54.9
Nov. 29	648 649 650 651 652 653 654 655 656 657 658	668 669 670 671 672 673 674 675 676 677	0024 + 264 - 20 - 4 + 174 - 124 + 45 + 147 + 120 + 98	0038 + 160 - 71 - 11 + 120 - 40 - 114 + 16 + 142 + 81 + 75	9.45	0227 +.2495 - 189 - 38 +.1644 - 132 1172 + 425 +.1389 +.1134 + 926	0359 +.1512 - 671 - 104 +.1134 - 378 1077 + 151 + 1342 + 765 + 709	4.10 4.09 4.07 4.05 4.04 4.03 4.00 3.99 3.98 3.96 3.93	006 + 61 - 5 - 1 + 41 - 3 - 29 + 11 + 35 + 29 + 24 +.014	009 + 37 - 16 - 3 + 28 - 9 - 27 + 4 + 34 + 19 + 18 +.007	24.6 20.4 16.3 16.2 20.2 24.2 28.0 27.9 35.8 27.7 19.7

TABLE XI. — DERIVATIONS OF CORRECTIONS TO ASSUMED PARALLAX — Continued.

	Nos. Plates	COMBINED.	(E-	W) <sup>8</sup> ·		(E-	W)".		Δ	т.	
DATE.	East.	West.	First Determi- nation.	SECOND DETERMI- NATION.	15 COS 8	FIRST DETERMI- NATION.	SECOND DETERMI- NATION.	Σ <b>π</b> f.	FIRST DETER- MINA- TION.	SECOND DETER- MINA- TION.	WEIGHT.
Dec. 5	713 714 715 716 717 718 719 720 721	733 734 735 736 737 738 739 740 741 742	0266 + 114 + 1158 + 36 + 81 + 79 + 167 + 152 - 58	*0243 + 57 + 115 + 109 + 113 + 200 + 93 + 214 + 205 - 21	9.86	"2623 +.1124 + 108 +.1558 + 355 + 799 +.1647 +.1499 - 572	"2396 + 562 +.1134 +.1075 +.1114 +.1972 + 917 +.2110 +.2021 - 207	3.98 3.97 3.96 3.96 3.93 3.92 3.90 3.88 3.86 3.84	"066 + 28 + 3 + 39 + 20 + 20 + 42 + 39 - 15	"060 + 14 + 29 + 27 + 28 + 50 + 24 + 54 + 52 - 5	27.0 27.8 27.7 31.7 23.6 19.6 19.5 31.0 23.2 30.7
Dec. 6	744 745 746 747 748 749 750 751 752 753 754	764 765 766 767 768 769 770 771 772 773 774	+ 293 +.0110 + 388 + 46 + 190 + 183 - 115 - 7 + 66 + 56 + 111 - 24	+ 379 + 0092 + 294 + 109 + 80 + 204 - 73 + 9 + 56 + 43 + 135 + 7	9.93	+ 2889 + 1092 + 3853 + 457 + 1887 + 11817 - 1142 - 70 + 655 + 556 + 1102 - 238	+.3737 +.0914 +.2919 +.1082 + 794 +.2026 - 725 + 89 + 556 + 427 + 1341 + 70	3.83 3.98 3.97 3.97 3.95 3.93 3.91 3.90 3.88 3.86 3.84 3.82	+ 75 +.027 + 97 + 12 + 48 - 29 - 2 + 17 + 14 + 29 - 6 +.023	+ 98 +.028 + .023 + 74 + 27 + 20 + 52 - 19 + 2 + 14 + 11 + 35 + 2 +.022	27.9 31.8 27.8 27.7 27.5 31.3 23.4 27.2 27.0 30.7 30.6
Dec. 7	775 776 777 778 779 780 781 782 783 784 785	796 797 798 799 800 801 802 803 804 805 806	0148 + 56 - 102 + 14 + 326 - 25 + 66 + 198 + 166 + 87 - 1	0128 + 92 - 47 + 47 + 305 + 51 + 182 + 194 + 167 + 307 + 18	10.00	1480 + 560 1020 + 140 +.3260 - 250 + 660 +.1980 +.1660 + 870 - 10	1280 + 920 - 470 + 470 +.3050 + 510 +.1820 +.1670 +.3070 + 180	3.94 3.92 3.91 3.88 3.87 3.84 3.83 3.82 3.79 3.76	038 + 14 - 26 + 4 + 84 - 7 + 17 + 52 + 44 + 23 0 +.015	032 + 23 - 12 + 79 + 13 + 48 + 51 + 44 + 81 + 5 + .028	27.6 31.4 27.4 19.4 27.1 26.9 23.0 22.9 26.5 26.4 30.1
Dec. 24	895 896 897 898 899 900 901	908 909 910 911 912 913 914	0109 - 199 - 41 + 84 - 16 + 11 - 161	0176 - 255 - 108 - 11 - 66 - 76 - 239	11.28	1230 2245 - 462 + 948 - 180 + 124 1816	1985 2876 1218 - 124 - 744 - 857 2696	3.63 3.60 3.58 3.56 3.53 3.51 3.49	034 - 62 - 13 + 27 - 5 + 4 - 52 019	055 - 80 - 34 - 3 - 21 - 24 - 77 042	25.4 25.2 14.3 21.4 28.2 21.1 17.4

TABLE XII.—Positions of Faint Stars Derived from Crossley Plates.

DATE.	PLATE No.	STAR.	a 1900. o.	ð 1900. o.	No. of Images.	Remarks.
1900			h m s	• / "		
Oct. 9	122	u	2 42 54.470	+47 53 39.89	5	
	123		.482	.85	4	
	125	1	-488	.75	4	·
	122	X1	2 42 48.637	47 55 5.16	5	
	123		.628	.13	4	Faint.
	125		.653	.10	4	Faint.
	122	X2	2 42 50.090	47 55 35-92	5	·
	122	y	2 43 1.157	47 56 7.79	5	1
	123		.169	-94	4	
	122	z	2 43 2.621	47 54 49-92	5	
	123		.604	.82	4	
	125		.617	.71	4	Faint.
Oct. 10	129	x	2 42 14.987	48 21 47.79	3	
	130		-999	.79	5	
	131		15.005	-53	3	
Oct. 15	204	x	2 39 3.154	49 52 32.85	4	
	205		.136	.62	5	
	207		.133	.70	5	Very faint.
Oct. 16	232	x	2 38 4.007	50 17 13.90	4	Very faint.
	235		3.998	.89	4	
	236		4.002	.69	3	Very faint.
Oct. 21	258	x	2 31 35.526	51 52 23.19	2	Faint.
•	266		∙534	22.83	2	Very faint.
	267		.513	23.19	4	
	268		∙537	22.86	ı.	Very faint.
	258	y	2 33 36.723	51 28 48.20	2	Faint.
	248		•739	.15	3	
	250		.718	.22	3	
Oct. 26	329	x	2 25 4.230	52 57 21.05	4	
	331		-249	20.71	3	Image I very faint.
Oct. 29	353	x	2 20 15.254	53 23 21.51	3	
	354	_	.214	.46	3	Faint.
	355		.207	.70	3	Faint.
	353	y	2 20 16.376	53 23 44-27	3	
	354		.378	.68	3	Faint.
	355	l	.365	.76	3	Faint.
	354	z	2 18 43.359	53 34 5.05	3	
	355	_	.370	·43	3	
Nov. 1	360	x	2 13 43.196	53 53 36.14	5	Images of plate generally distorted.
l	361	_	.219	.13	3	
	362		.208	.16	3	
	360	y	2 14 46.894	53 54 16.04	5	Very faint and distorted.
	36I	,	.874	.14	3	Faint.
				·		
1	360	z	2 14 54.137	53 49 34.70	5	Faint and distorted.
	361		.179	.50	3	
	362		.189	.58	3	

TABLE XII. - Positions of Faint Stars Derived from Crossley Plates - Continued.

DATE.	PLATE No.	STAR.	a 1900. o.	ð 1900. o.	No. of Images.	REMARKS.
			h m s	• , , ,,		77
Nov. 2	384	x	2 13 5.086	+53 58 7.90	4	Very poor images — faint and distorted.
	385		.125	.61	4	
	386		.178	.87	4	
Nov. 3	408	x	2 10 47.656	54 3 42.91	5	
	411		.685	.92	4	
	414		.684	43.00	3	
Nov. 5	445	y	2 6 8.760	54 13 59.79	5	Image I poor.
	447		.691	14 0.01	5	
	450		.705	0.21	4	
Nov. 10	486	t	1 56 30.481	54 19 35.79	5	
	487		· <b>4</b> 75	.76	5	
	486	W	1 56 57.193	54 22 36.14	5	
	487		.182	35.58	5	,
	492		.181	-55	5	
	486	x	1 55 48.955	54 20 17.09	5	
	487		.941	.08	5	
	492		.985	.12	5	
	486	y	1 55 50.385	54 20 10.29	5	
	487		.356	.30	5	7
	492		-444	.66	5	Faint and distorted.
	486	x	1 55 53.842	54 20 10.92	5	
	487		.883	.70	5	
	492		.877	.88	5	
Nov. 12	518	x	1 51 43.617	54 12 11.29	3	
	519		-593	11.00	3	i '
	520		.583	11.26	4	
	518	Z	I 52 49.954	54 14 40.58	3	
	519		.930	.66	3	
	520	:	.920	-74	4	·
Nov. 13	538	t	1 48 46.131	54 7 32.96	3	·
	538	u	1 50 57.556	54 12 0.55	3	
	539		.570	.86	5	
	540		.581	.83	5	
	538	₩	1 49 10.162	54 8 21.19	3	
	539		.151	.2094	5	
	540		.164	.92	5	
	538	w	1 50 45.256	54 7 33.95	,	
	539	-	.239	34.21	3 5	
l	540		.276	33.88	5	
	1			†	1	
Dec. 2	679	x	1 26 48.030	50 8 7.94	3	
	681		.051	8.33	3	
Dec. 11	848	x	1 28 54.835	46 48 35.43	5	
	'		34.55			

١



## APPENDIX.

## DESCRIPTION OF THE MEASURING-ENGINE.

This engine was constructed by the firm of Stackpole & Brother, New York, from designs by Professor William Harkness, of the U. S. Naval Observatory. As no account other than the paragraph on page 76, vol. 1, Lick Observatory Publications, has been published, it seems desirable to include a short description here.

The engine is intended for the measurement of plates  $6 \times 6$  inches or smaller, at one setting, either by rectangular or by polar coördinates, with the plates in a horizontal position only. The accompanying illustration will make plain its general features as used in the Eros work. It is of brass throughout (excepting the screws) and is very solidly built.

A micrometer-microscope and a small transit telescope are provided with the engine. The transit telescope is used to test the straightness of the slides. A spirit-level, extra microscope-objectives, and eye-pieces are also provided.

The machine is provided with a circle 12 inches in diameter, divided on silver to 5' and read by verniers to 5''. On this circle is fastened a glass stage to carry the negative to be measured. Two slides and scales, approximately parallel to the X and Y axes, respectively, permit of the determination of both rectangular coördinates simultaneously.

The setting-telescope containing a fixed glass reticle is attached rigidly to the carriage moving along the X-axis. This carriage and its ways are in turn attached to a larger one which moves along the Y-axis. Clamps and slow-motions are provided in both cases.

The scales are of glass and read by microscopes rigidly fixed to the telescope carriages. The divisions of the glass scales are 0.02 inch apart and are identified by means of auxiliary silver scales. The microscopes for reading the glass scales have glass reticles which enable readings to be made directly to 0.001 inch and by estimation to 0.0001 inch.

Scale A is used to measure X-coördinates; scale B, to measure Y-coördinates.

The errors of scale A were investigated in the Department of Weights and Measures, U. S. Coast and Geodetic Survey. The results of the investigation are printed in vol. III, part III, of the Lick Observatory Publications.

Using scale A as a standard, the errors of divisions 100 to 260, inclusive, of scale B were determined by Dr. H. K. Palmer. These results have not been printed heretofore. They are given at the end of this paper. For the sake of convenience, the numerical results for scale A are also given.

The errors of both scales have been found to be so small, in the portions used in the Eros work, as to be negligible.

This measuring-engine had been in use for a number of years prior to the commencement of the Eros measurements. During this time several difficulties had become apparent. The one which gave most trouble was the illumination. This defect could not be remedied without reconstructing the entire stage for carrying the negatives. As the stage provided with the engine was of weak design, an entirely new one, with more convenient illumination, was made in the Lick Observatory shops and attached.

The clamps and slow-motions for the circle and its vernier were badly placed. The slow-motion screw for the *vernier* was in front where it was occasionally displaced accidentally by the observer. This was remedied. The clamp and slow-motion for the circle (and attached negative) were changed to a more convenient position.

The slides of this engine are not exactly at right angles. The deviation amounts to 11' 30". If we face the A scale of the engine, looking along the longer slides (Y-axis) and across the shorter slides (X-axis) the inclination is such as to cause the upper left-hand and lower right-hand angles to be less than 90°, by 11' 30". A negative made in the ordinary way, where proper orientation in the sky is secured by looking through the negative with the film side away, when placed on the engine film side up and measured, requires corrections as follows:

The X-measures are to be corrected by  $+ Y \sin I$ .

The Y-measures are to be multiplied by  $\cos I$ , where I is the defect of inclination (II' 30'').

The division-errors of the circle have not been determined, so far as I know, but are doubtless small. In determining the inclination of the slides, different parts of the circle were used to eliminate any such errors. No noticeable errors were found, however.

APPENDIX 97

## TABLE OF SCALE A OF THE L. O. MEASURING-ENGINE (STACKPOLE).

The table gives the distance from o division to any division-mark on the scale at  $16^{\circ}.67$  C. Let  $S_0$  be any such distance at  $16^{\circ}.8$  C. and  $S_t$  be the same distance at t degrees.

 $S_t = S_0 (1 + 0.000008(t - 16^{\circ}.8))$ 

SCALE.	Inch.	SCALE.	Ince.	SCALE.	Inch.	SCALE.	Inch.	SCALE.	Інсн.	SCALE.	Ince.
0	0.00000	51	1.01941	101	2.01847	151	3.01741	201	4.01636	251	5.01545
1	.01995	52	.03938	102	.03846	152	.03741	202	.03638	252	.03543
2	.03994	53	.05934	103	.05844	153	.05741	203	.05641	253	.05542
3	.05997	54	.07928	104	.07845	154	.07737	204	.07641	254	.07541
4	.07997	55	.09926	105	.09845	155	.09732	205	.09643	255	.09540
5	.09998	56	.11924	106	.11843	156	.11728	206	.11640	256	.11537
6	.11994	57	.13918	107	.13839	157	.13724	207	.13639	257	·13534
7	.13992	58	.15919	108	.15838	158	.15725	208	.15641	258	.15531
8	.15991	59	.17915	109	.17835	159	.17724	209	.17637	259	.17532
9	.17989	60	1.19916	110	2.19836	160	3.19723	210	4.19639	260	5.19532
10	0.19988										
11	0.21991	61	1.21918	111	2.21831	161	3.21715	211	4.21632	261	5.21531
12	·23995	62	.23918	112	.23825	162	.23713	212	.23628	262	.23530
13	-25999	63	.25917	113	.25827	163	.25711	213	.25623	263	.25528
14	.27996	64	.27912	114	.27823	164	.27713	214	.27619	264	.27526
15	.29990	65	.29912	115	.29818	165	.29713	215	.29619	265	.29523
16	.31988	66	.31911	116	.31813	166	.31712	216	.31617	266	.31519
17	.33987	67 68	.33910	117	.33812	167	.33705	217	.33615	267	.33516
1	.35984 .37981	69	.35908	118	.35813 .37810	168	-35705	218	.35617 .37610	268 269	.35515
19 20	0.39978	11 - 1	.37904	119	2.39805	169 170	.37704	219	4.39606		.37512
20	0.39976	70	1.39905	120	-	170	3.39704	220	4.39000	270	5.39513
21	0.41980	71	1.41903	121	2.41801	171	3.41699	221	4.41603	271	541512
22	.43978	72	.43898	122	.43800	172	.43702	222	.43600	272	.43514
23	·45977	73	.45899	123	-45790	173	.45701	223	.45596	273	.45510
24	·47979	74	.47895	124	·47791	174	.47701	224	.47596	274	.47506
25	.49976	75	.49888	125	.49788	175	.49695	225	·49593	275	.49506
26	.51974	76	.51888	126	.51784	176	.51694	226	.51593	276	.51507
27	·539 <b>73</b>	77	.53887	127	.53782	177	.53692	227	.53587	277	-53504
28	·55975	78	.55888	128	.55780	178	.55691	228	.55591	278	.55509
29	.57973	79	.57887	129	.57778	179	.57693	229	.57585	279	.57510
30	0.59969	80	1.59882	130	2.59777	180	3.59689	230	4.59581	280	5.59512
31	0.61968	81	1.61881	131	2.61775	181	3.61690	231	4.61583	281	5.61515
32	.63964	82	.63878	132	.63774	182	.63688	232	.63580	282	.63517
33	.65962	83	.65878	133	.65774	183	.65690	233	.65576	283	.65515
34	.67959	84	.67877	134	.67772	184	.67689	234	.67570	284	.67514
35	.69955	85	.69879	135	.69767	185	.69683	235	.69571	285	.69521
36	.71958	86	.71875	136	.71763	186	.71682	236	.71568	286	.71519
37	.73956	87	.73876	137	.73758	187	.73677	237	.73568	287	.73520
38	·75955	88	.75872	138	·75757	188	.75673	238	.75568	288	•75519
39	.77956	89	.77867	139	-77757	189	.77669	239	.77568	289	.77514
40	0.79951	90	1.79867	140	2.79756	190	3.79668	240	4.79570	290	5.79514
4I	0.81952	91	1.81867	141	2.81756	191	3.81665	241	4.81564	291	5.81516
42	.83948	92	.83862	142	.83754	192	.83664	242	.83564	292	.83517
43	.85946	93	.85863	143	.85752	193	.85658	243	.85558	293	.85517
44	.87947	94	.87859	144	.87750	194	.87656	244	.87562	294	.87523
45	.89947	95	.89861	145	.89745	195	.89654	245	.89558	295	.89524
46	-91947	96	.91858	146	.91745	196	.91652	246	.91553	296	.91520
47	.93948	97	.93854	147	.93741	197	.93647	247	.93551	297	-93517
48	.95946	98	.95854	148	-95739	198	.95644	248	-95549	298	.95518
49	·97944	99	.97851	149	-97739	199	.97645	249	.97552	299	.97516
50	0.99943	100	1.99848	150	2.99741	200	3.99641	250	4.99547	300	5.99515
	± 1		± 3		± 3		± 4		± 5		± 5

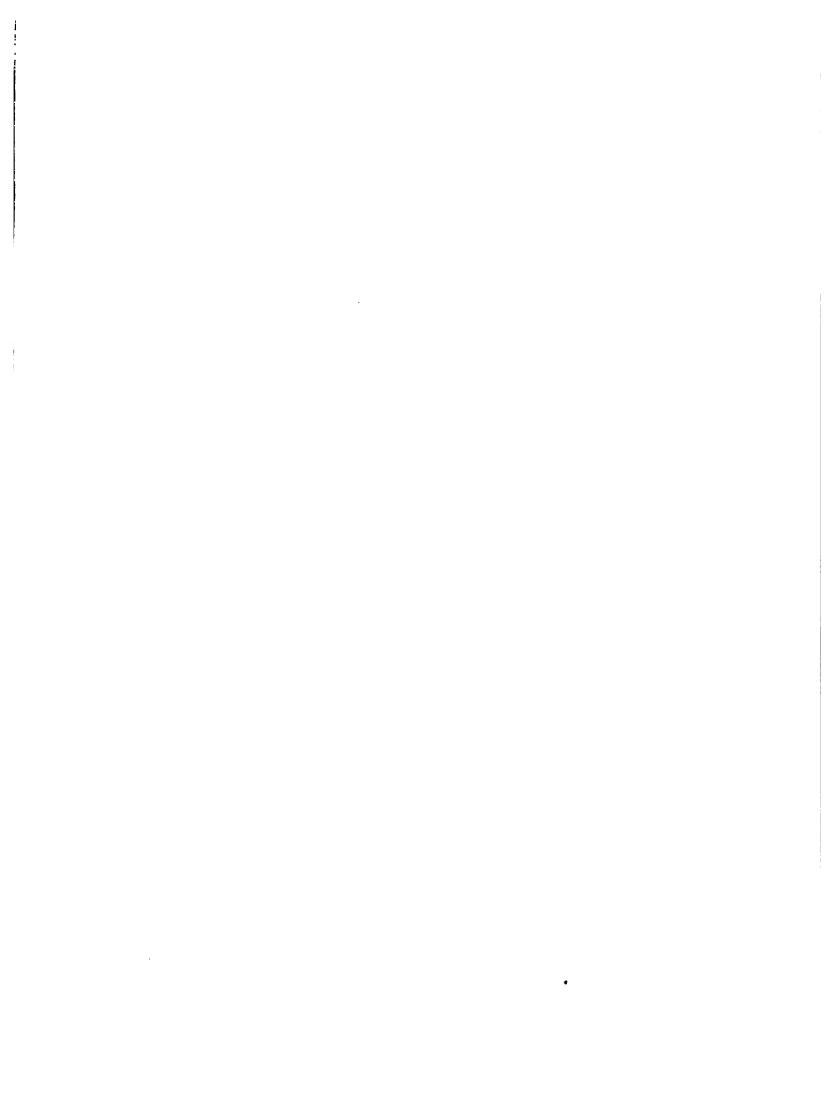
н

## DETERMINATION OF THE SOLAR PARALLAX

TABLE OF SCALE B OF THE L. O. MEASURING-ENGINE (STACKPOLE) - Continued.

SCALE.	Inch.	SCALE.	Inch.	Scale.	INCH.	SCALE.	Інси.
100	2.00000	141	2.82053	181	3.62124	221	4.42187
101	.02007	142	.84063	182	.64124	222	.44193
102	.04006	143	.86064	183	.66127	223	.46196
103	.06006	144	.88064	184	.68130	224	.48202
104	.08007	145	.00070	185	.70120	225	.50205
105	.10000	146	.g206g	186	.72127	226	.52205
106	.12014	147	.94075	187	.74133	227	.54202
107	.14016	148	.96074	188	.76133	228	.56203
108	.16019	149	.98071	180	.78137	220	.58208
100	.18021	150	3.00078	190	3.80136	230	4.60208
110	2.20022						4
111	2.22022	151	3.02071	191	3.82140	231	4.62209
112	.24020	152	.04081	192	.84141	232	.64212
113	.26024	153	.06082	193	.86146	233	.66215
114	.28031	154	.08080	194	.88150	234	.68214
115	.30028	155	.10085	195	.90145	235	.70212
116	.32036	156	.12085	196	.92146	236	.72217
117	.34036	157	.14095	197	.94146	237	.74222
118	.36035	158	.16093	198	.96149	238	.76221
119	.38039	159	.18091	199	.98158	239	.78228
120	2.40037	160	3.20097	200	4.00155	240	4.80232
121	2.42036	161	3.22095	201	4.02157	241	4.82235
122	.44041	162	.24102	202	.04165	242	.84236
123	.460 <b>43</b>	163	.26099	203	.06170	243	.86237
124	.48043	164	.28099	204	.08172	244	.88239
125	.50042	165	.30100	205	.10174	245	.90238
126	.52037	166	.32101	206	.12169	246	.92237
127	.54046	167	.34105	207	.14174	247	.94239
128	.56048	168	.36107	208	.16174	248	.96234
129	.58048	169	.38105	209	.18176	249	.98239
130	2.60049	170	3.40113	210	4.20176	250	5.00238
131	2.62051	171	3.42116	211	4.22177	251	5.02242
132	.64056	172	.44123	212	.24175	252	.04251
133	.66050	173	.46120	213	.26172	253	.06256
134	.68050	174	.48120	214	.28179	254	.08254
135	.70055	175	.50122	215	.30180	255	.10256
136	.72056	176	.52120	216	.32179	256	.12258
137	.74059	177	.54127	217	.34180	257	.14263
138	.76061	178	.56120	218	.36185	258	.16264
139	.78063	179	.58123	219	.38190	259	.18265
140	2.80060	180	3.60118	220	4.40191	260	5.20261





			~	
		~		
,				
}				
:				



